

July 1993

# The National Locksmith®

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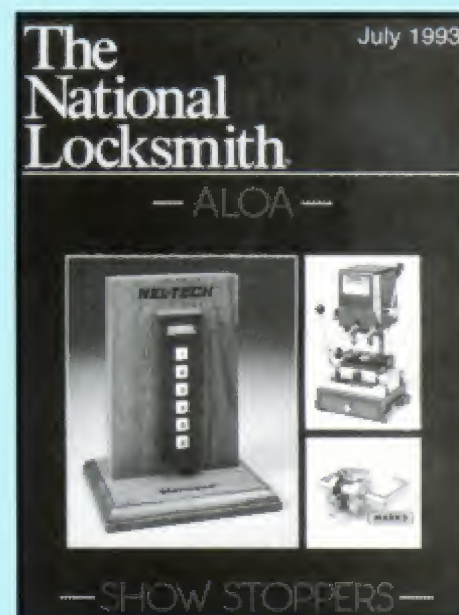


# Contents

July 1993 • The National Locksmith • Vol. 64, No. 7

- 22** Corbin 29  
Rim Device
- 30** Ford Probe  
Ignition Service
- 38** Doors And  
Frames
- 48** Showstoppers
- 66** Booth Listings  
And Map
- 70** Nel-Tech  
Keypad System
- 84** Aspirin And  
Old Lock
- 92** Safecracking  
Frenzy!

- 108** 1992 Toyota  
Camry
- 114** Horizontal  
Nissans
- 124** MOSLERsicle
- 126** Sweet Home  
Milwaukee
- 133** '87 Supra  
Trunk Repair
- 141** Don-Jo  
Manufactuirng
- 142** Open The '93  
Mazda RX7



**On The Cover**  
(Clockwise from left) Nel-Tech: HPC Inc.; and Marks U.S.A. Our annual Showstoppers section, including products to be exhibited at this year's ALOA Show in Chicago, begins on page 48. For a complete list of ALOA exhibitors, turn to page

## Departments

- 5 Commentary
- 6 Letters
- 11 Technitips
- 16 Newsmakers
- 146 Shop Talk
- 158 Business Briefs
- 162 Bits & Pieces
- 165 The Lighter Side
- 166 Beginner's Corner

**Click on the article  
you wish to read**

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# Commentary

## Introducing A New Correspondence Course!

This month brings a lot of excitement to the locksmith and security industry. Of course, the ALOA show will be held in Chicago this month. We would like you to visit us at booth # 527 while you're at the show.

Also, in this issue, we are introducing a brand new product from *The National Locksmith*. We are premiering a new concept in locksmith education with the introduction of a correspondence course on an advanced locksmith skill...Masterkeying.

Our course is called BASIC MASTERKEYING and it is a complete education on the subject. Thirteen lessons are included, and all together the course consists of over 450 pages and over 120 illustrations! Each lesson includes a quiz. Plus there are tests which you will complete and send back to us for grading. You may move through this course at your own pace in complete privacy.

We have taken a great deal of time to make this course simple to understand so that you will be sure to completely learn the material. You WILL be a competent masterkeyer after passing the course! Yet, our course is extremely comprehensive. In fact, because of the huge number of pages involved, you will also receive a custom binder in which to keep your materials.

Masterkeying is an important locksmith profit center. Yet, it can be complex to learn. And up till now, to do a proper job, you had to travel to an expensive seminar. Perhaps you caught all the information. Perhaps not. In the Basic Masterkeying correspondence course from *The National Locksmith*, you do not have to travel anywhere. Plus you are going to learn properly because the techniques we use are easy to follow, and you work at your own pace.

Prepare yourself to earn additional profits by learning how to masterkey. After all, this is an important area that separates the hardware store key cutters from the real locksmith.

I think you will be amazed at the low special introductory price which we are temporarily offering on this course. Please see the ad on page 10 for further details. And if you want even more information, please call our Managing Editor, Tom Seroogy at (708) 837-2044. He can give you a complete overview about the course!

Another new introduction taking place this month is one that is long overdue. Our latest book is called THE LIGHTER SIDE OF LOCKSMITHING, by Sara Probasco. This book consists of more than 180 pages of Sara's best, and funniest, articles on locksmithing. If you have ever read and enjoyed one of Sara's articles (and who hasn't?) then you will want to be sure to order her book. Please see the ad on page 118 for more information.

\*\*\*\*\*

An article in the recent issue of the AAA Motor Club's magazine, *Home & Away*, contains information that should be of interest to all locksmiths.

Here is the relevant paragraph: "In order to increase guest security, AAA now is requiring approved lodgings to install deadbolts and peepholes. Rooms that open to a common hall must have deadbolt locks that can't be opened from the outside when locked from the inside. Peepholes must give guests a full view of the area outside their rooms. The new requirements take effect in August and AAA-approved lodgings that meet the guidelines will be included in the 1995 *TourBooks*."

I suggest that you obtain a current copy of the TourBook from AAA so that you may call up listed hotels and motels in your area. Inform them of these guidelines and make yourself available to do the installations.

See you in Chicago!



*Marc Goldberg*

Editor/Publisher

July 1993 5



# Letters

Comments, Suggestions and Criticisms

*The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.*

## Reader Applauds TNL's Technical Support

Dear Marc:

Because of the conversation I had this morning and the assistance that your Managing Editor Tom Seroogy gave me, I am joining N.S.O.

The support that he gave me has put him and *The National Locksmith* at the top.

I have been associated with the locksmith trade since 1958 and have never been treated better than Tom treated me with the technical advice and help that he gave me today.

Lee Whiteford  
California

## Locksmith Feels AAA Is Stealing Business

Dear Marc:

The fact that AAA is asking car manufacturers to start making driver's side doors to only be locked with key's is wrong. I feel lock-outs are 40-50 percent of our business. After all we spend large amounts of money on tools and education and

then to have AAA to ask to prevent lock-outs is taking food off our table. I feel all locksmith's should boycott AAA Contracts in the future.

M. Sanders  
Florida

*Editors Note:*

*Mr. Sanders, I understand your frustration. However, it is not realistic to change AAA opinion on this matter. The car makers probably won't make this change, though, because car buyers would find the change to be an annoying inconvenience.*

## Member Responds to 'Collection' Letter

Dear Marc:

In the May 1993 issue of *The National Locksmith* Les Harris of Connecticut, mentioned a collection problem with Cross Country Motor Club of Boston, MA.

On April 11, 1993 I received a call from them to open a 1993 Oldsmobile. After completing the job I submitted an invoice as per their instructions and received a check in 21 days.

I think they are a reputable and honest motor club.

Bill Tinker  
New York

## Another Reader Defends Cross Country Motor Club

Dear Marc:

I am probably sticking my nose in

where it doesn't belong but that's not unusual for me. In regards to Les Harris's Letter to the Editor in the May 1993 issue, in which he condemns "Cross Country Motor Club" I find it necessary to put in my two cents worth on the subject. I have worked for several years for Cross Country Motor Club and found them to be very reliable. I have never had a problem getting paid but I do ask a lot of questions.

When they call to have work done I write everything down including a return phone number for the customer also the member number, confirmation number and what the job is going to cost. When I arrive at the customer vehicle I write down the VIN number and confirm the customers name and/or member number. They always ask what my price is going to be and have never argued about it. If I have a problem I have their call back number and name of the person on duty.

I can only speak for myself, but after working for another Motor Club for a couple of years and being woke up at all hours of the night with calls intended for another locksmith 30 miles away, I find it a blessing to work for "Cross Country Motor Club".

Yours for better picking.

W.E. Backus  
Florida

*Continued on page 8*



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Continued from page 6

## Locksmith Satisfied With Motor Club

Dear Marc:

I am writing to you in reference to a letter printed in the May 1993 issue of *The National Locksmith*. In a letter from Les Harris of Connecticut, he stated that when doing automotive work involving the Cross Country Motor Club, "Locksmiths are advised to hold on to those car keys until they get paid for what ever services they provide."

Our company's first dealing with Cross Country was no problem. On Sunday April 11, 1993 a Cross Country Representative contacted us about a customer who had locked their keys in the trunk of their 1992 Oldsmobile. We agreed to accept their purchase order number and send off a bill the following Monday.

Before getting off the phone I had all of the information I needed to open the trunk of this car. Our terms with reputable companies are net 30 days. Our bill was sent on the 12th of April, and on May 4th the mailman was kind enough to deliver a check from Cross Country for the full amount that we had previously agreed upon.

We have since filled out all the

work that comes up in this area, and Cross Country Motor Club has been more than cooperative. I would encourage Locksmiths to get involved with Cross Country. Contrary to the accusations of Mr. Harris, "ungratefulness and dishonesty" was not a factor.

R.W. Siebert  
Washington

## Small Businesses Potentially Hurt By USPS Actions

Dear Marc:

In your May 1993 issue, I read with interest the letter from Don Thompson of California entitled "Post Office Now Installs Mailbox Locks." This is only the tip of the iceberg on the post office.

The USPS is destroying small businesses by giving away what they call neighborhood delivery and collection box units (NDCBU'S) to apartment and condo units. What several of us have run into is that the USPS is putting pressure on property developers, apartment managers to remove the old mailboxes and replace them with the new USPS pedestal box "free of charge". The USPS will then maintain the boxes and sell apartment

and condo property managers new locks and keys for the broken locks and lost keys. The reason that the USPS started this plan was they were afraid that congress would eliminate the monopoly that the USPS has, and would allow others to deliver the mail. The USPS will then own the boxes and will control who puts mail in the USPS boxes.

The USPS putting in these boxes hurts numerous small businesses such as locksmiths, mailbox manufacturers, hardware stores, apartment maintenance companies and lock manufacturers.

Several of us small business owners have written to our Congressman, who told us that it is illegal for the post office to do this. It seems that large companies will not complain because they are afraid of losing their present or potential contracts with the USPS. If more small businesses write to their representatives in congress, we will have a greater voice in stopping another government agency from infringing on the American Free Enterprise System.

Lou Bone  
California



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# Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sieveking

## July's Best Tip

Removing the ignition lock cylinder on Cadillacs with telescoping steering wheels have frustrated many new locksmiths, as the telescoping shaft function must be locked to remove the lock plate. In the past, a 5/16" course thread set screw, screwed into the steering shaft locked the shaft, so that standard lock plate compression tool worked.

The 1986 Cadillac Seville, (and probably later and other models) changed the inside thread dimension of the their shaft. Not having the proper threaded set screw, I cut a #10 machine screw, 1" long, and placed the headless end of the bolt into the hole of the telescoping shaft. Hand-tightened the lockplate

compression tool tightly over the shaft to press the locking shaft down, and lock the telescoping section of the steering shaft. The lock plate compression tool can then be used to remove the retaining "C" clip and lock plate.

It works just as effectively as the old set screw method. The bolt length may require adjustment depending on the exact compression tool used, as the bolt is "

sandwiched" between the inside top of the compression tool and the bottom of the steering shaft hole, which locks the telescoping function. I believe this technique will work on all U.S. made telescoping steering columns regardless of internal thread dimension.

Giles Kalvelage  
Illinois

\*\*\*\*\*

## How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to The National Locksmith. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not** be eligible! So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1992? Enter today! It's a lot easier than you think!

## Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

## Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.



#### All-Lock VATS Decoder Winner

This may not be new but it works. I had a late night call this week. A woman called and informed me that she was visiting from Michigan. Some family members were helping her load the car and she had set her purse in the trunk. She forgot the purse, and closed the trunk. The car was a 1986 Ford Thunderbird.

I went down and started trying to pick the trunk lock. After a while I heard one of the men tell her I wouldn't be able to open it and they all went into the house. I went to the glove box, opened the door. By

pulling in the sides, the door can be opened far enough to access the wiring behind the trunk and gas door release buttons. On the 1986 Thunderbird there are two buttons one for the gas lid and one for the trunk. The gas lid will open with ignition off but the trunk will not. Identify the power side of the gas door release, and use a jumper wire to touch either side of the trunk release button while the button is depressed. The trunk should open. The trunk opened, I put the plugs back together, and closed the glove box.

There is no purpose or profit in

giving away trade secrets in front of your customers.

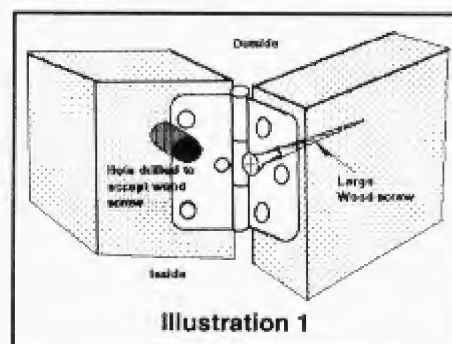
John Franklin  
Iowa

\*\*\*\*\*

#### HPC Pistolpick Winner

This is a way to prevent a door from being pried open from the outside if the removable hinge pins are exposed.

(See illustration 1.)



R.W. Staples  
Washington

\*\*\*\*\*

#### Silca Keyblanks Winner

Some newer GM 4 door cars have a child safety lock feature on the rear doors which prevents the inside handles from opening the door, even if the lock button is unlocked. To engage the feature, a lever on the door face next to latch is pushed down. (No access to lever is possible, when the door is closed.) recently ran across this feature on a 1992 4 door Caprice. The customer couldn't open the right rear door from the inside or outside. The outside handle linkage was disconnected, and the child safety feature was engaged. Using a light to examine the left door latch area inside the door, I worked the safety lock lever and could see it move up and down. With this knowledge, I went back to the right rear door and manipulated the safety lock to the unlocked position with a "Z" tool, which enabled me to open the door from inside. I removed the trim panel and reconnected the outside handle linkage to complete the repair. This lockout was very easy to solve, after the actual cause was found.

Clarence Martin  
Georgia

\*\*\*\*\*

Continued on page 14



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Continued from page 12

### ESP Pickset Winner

This Technitip concerns the new style Ford 10 Cut key. When called upon to work on a Ford product that uses a 10 cut key, check the glove box lock. See if the ignition blank will pass the keyway. The first six (6) cuts of the ignition key can be found in the door cylinder. The seventh (7) and tenth(10) cuts can be found in the glove box cylinder. This makes the remaining cuts (8&9) very easy to progression, using only the basic rule of "not more than two cuts difference between adjacent cuts."

### Ford 10 Wafer?

Check the glove box cyl.

It could simplify making the ignition/Door key.

Position	1	2	3	4	5	6	7	8	9	10
Door	X	X	X	X	X	X				
Glove							X			X
Ign.					X	X	X	X	X	X

Illustration 2

In the glove box cylinder, there are four spaces at the tip of the key. The 7 and 10 cut positions contain active

or working wafers. The 8/9 position is taken up by a block bar guide, that can be reversed to fit the primary or secondary blank. The bar guide does not rest on the biting portion of the key, but on the milled shoulder of the blank. It blocks the keyway for the milling of the blank. Illustration two shows the wafer locations which I found.

Jerry Robinson  
Illinois

\*\*\*\*\*

### E-Z Pull GM Wheel Puller Winner

This tip involves a pair of very simple and inexpensive, yet invaluable tools, namely hardware store variety, wedge-shaped rubber door stops. When installing or repairing locks while still on the door, just wedge one on each side of the door and you don't have to wrestle with the door while you work on the lock. Recently, I was called out to a school to remove a showcase lock for a pair of sliding glass doors. The lock had fallen victim to several attempts at "picking" by teachers and custodial staff, and had to be removed by drilling. I used the door stop to wedge the showcase lock

in a convenient position on the glass doors, and keep the lock from vibrating or moving while I drilled.

Darryl Dorton  
Indiana

\*\*\*\*\*

### Fort Lock Display Board

This tip is about Kryptonite style bike locks. I have many calls to open these locks. This lock can be opened, without damage to the lock cylinder, by the following technique. Pull the rubber boot back, next to where the key is inserted. It takes a little force to do this. Once you pull the rubber back, you will see a small retaining pin. Drill this pin out, and turn the lock cylinder. The lock will open. Then you can decode the cylinder like any other Ace style lock and reassemble the padlock. With a little practice, this job is fairly easy.

Bill Davidson  
California

\*\*\*\*\*

Using the micrometer card for my HPC 1200CM, a pair of machinist dividers and a couple of articles from



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the National Locksmith, I was able to use my "old" Chrysler double sided Card for the new '93" locks.

Explaining how I did it always took up two pages, but in a nutshell; Set your dividers at 340 thousandths. Set one leg on the bottom of the line at space one on your old card. Strike a point good and deep to the right of this line, following as close as possible the original arc of spaces. Walk your dividers to the left, following the bottom of the lines as they arc. Strike each point deeply so you won't slip. These are your new spaces for the J series codes. Depths are the same.

These cars are selling like hotcakes around her, so since the codes have been printed, I am all set and don't have to wait for the new card.

Ron Ryder  
Nevada

*Editors note: Though this Tip is given, essentially as it was written, I would rather see the locksmith use a "Conti-Card" to make a special and separate code card for the new ('93 and up) Chrysler locks. The tip gauge is different, and a shim should be used over the blank for proper clamping. You will want to order the correct card (X60), as soon as you can afford it. There is additional information contained on the card to help the professional locksmith originate keys to these vehicles. Depth and space information, though essential to creating the key, is only a small part of the story. These cards are the professionals "edge" in servicing the lock system. Spend the money, get the right tools and "the rest of the story."*

\*\*\*\*\*

This tip is for customers that may have many keys of the same size or style on one key ring. If they have one key that would be used in an emergency situation or unlighted area, install a 1/8" by 3/16" aluminum rivet in the bow of the key. The key can then be more easily identified by touch. A number of keys, of the same manufacturer or head style, can be thus labeled, to accommodate a blind or sight impaired customer.

James Ashcraft  
Michigan

\*\*\*\*\*

This is just a quick tip for those locksmiths that do a lot of automotive work. I ran out of GM black door lock caps and went to 2 different wholesalers in the area to purchase some. They were out of stock too. I do a lot of work on Astro Vans and newer autos with blackened caps, so I needed them badly. I went to an Auto Paint store and bought some special flat black trim paint and painted some chrome caps. This is the paint used to touch up the black-out chrome around auto windows. The painted caps look the same as the original equipment caps, and the paint doesn't scratch off

any easier than the original paint did.

This method works, in a pinch, but the black oxide caps would be best.

Tom O'Neil  
Texas

\*\*\*\*\*

Here is a tip for all those locksmith selling hide-a-key boxes.

Instead of recommending an insecure plastic or tin box with a cheap magnet, I have come up with a much more practical and foolproof

*Continued on page 168*



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# Newsmakers

## New Products and Industry News

### Sesamee Plug Blok By CCL

The Plug Blok is an innovative security lock for electrical plugs. It helps to prevent unauthorized use of computers, power tools, copiers, and any electric item you desire. The Plug Blok fits most standard two and three prong plugs. While CCL makes no claim as to the Plug Blok being a safety device, it is ideal for homes and institution where there are small children. The Plug Blok is made of strong sturdy metal and there are 1000 different combinations that can be set and reset in seconds.



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### All-Lock's New Automotive Catalog

All-Lock will be distributing its brand new automotive lock catalog at ALOA in Chicago. Completely redesigned in a new easier to use



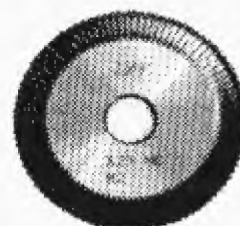
format, the catalog illustrates the company's full program of automotive lock products.

Besides the extensive line-up of domestic lock cylinders (including its O.E.M. GM replacement parts), the catalog includes illustrations of key blanks, service kits and the newest products, import car lock cylinders. The import car locks are assembled in Selma, Alabama and product is in stock and ready to ship

For FREE Information  
Circle 387 on Rapid Reply

### Key Machine Cutters From Jet

Manufactured using high speed "M2" steel, Jet Hardware is pleased to announce their entry into the key machine cutter field. Jet's initial offering includes nine of the most popular cutters. They include the CW16, 19MC, 23MC, X23MC, 23RF, 26MC, and 34MC. The descriptive literature indicates the key duplicating equipment that applies. Also Jet is



offering new "Tylon" 3" brushes. Model 7120-200 fits the most popular domestic machines. Model 7150-200 fits the metric measurements required on popular imported models.

For FREE Information  
Circle 388 on Rapid Reply

### Treskat's '93 CodeMaster Update

Treskat announces the release of CodeMaster Data File #14. More than 100,000 new and previously unreleased codes for American and foreign auto, Master padlocks, tubular locks, Arco bank bags and much, much more are included in this latest update.



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## Fort Knox Safes Offer New Features

Fort Knox Security Products' 1993 models offer a variety of new features. They have added a special Bolt Guard™, an angled steel bar, that protects the locking bolts from any possible defeat. They have also designed a hard plate with steel ball bearings mounted in critical areas to protect the locking mechanism against any drilling.



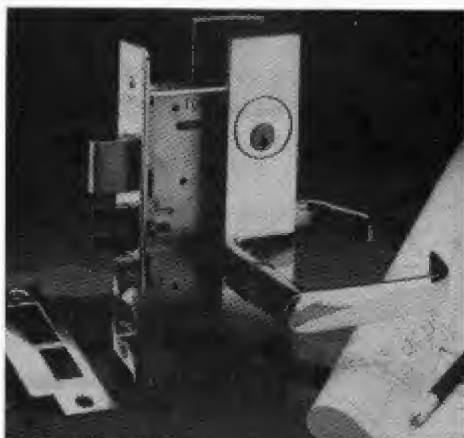
Fort Knox now carries the uncompromising UL listing for gun safes. The fire protection package, which they provide, has been tested and certified with temperatures exceeding 1200 degrees, while keeping the inside of the safe under 350 degrees.

**For FREE Information**  
Circle 401 on Rapid Reply

## Corbin Russwin's New Mortise Locksets

Corbin Russwin Architectural hardware announces two newly configured mortise locksets, the ML2200 and the ML2200HS.

The ML2200 Series is a



consolidation of the Corbin 9500/Russwin 5000 Series and the Corbin 9700/Russwin 7000 Series. ML2200 Series features include a chrome-plated lockcase, stainless steel anti-friction latch insert, and stainless steel stop. The newly configured lockset is available with many cylinder options, including master ring. In addition, two new function, the ML2232 institution function and the ML2217 classroom function deadlock, are available.

**For FREE Information**  
Circle 393 on Rapid Reply  
**GR 37MC-B Cutter**  
**By Gil-Ray**

Gil-Ray Tools Inc. has recently designed a larger size cutter wheel to replace the standard size 37MC cutter. The #37MC cutter is used to duplicate or cut by code from space and depth keys, on many key duplicating machines.

The new GR 37MC-B cutter is



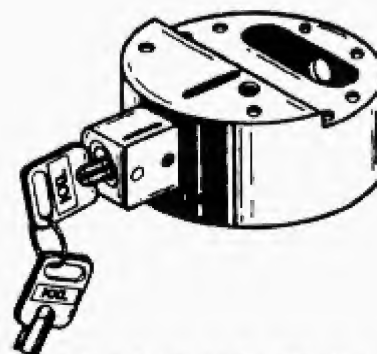
2.375" in diameter, with 72 precision ground teeth. The advantage to the locksmith is that there will be no difference in appearance between the duplicated key and the original key when the larger cutter is used; also the bottom cuts will be as true as original keys.

**For FREE Information**  
Circle 394 on Rapid Reply  
**KXL Manufacturing's**  
**Padlock/Cam Lock**

KXL Manufacturing is privately owned by Fort Lock's Founder, Sidney Falk, and manufactures all of its products exclusively in the United States.

Their first patented lock is the KXL Tumbler Cam Lock with precision cut anti-pick tumbler construction, which has been tested by some of the best known lock pickers, and has not been picked.

Their second product is the Shack-less Padlock. This lock also incorporates precision cut anti-pick tumbler construction with hardened dowel pin inserts to prevent saw through; one pine



is installed horizontally. This is the only mass produced lock with this exclusive feature.

Other features include duplex plating (automotive grade) for corrosion protection, exclusive snap action, and push to lock feature (does not require the key to relock).

Their new Cat #2, will include a series of six padlocks with four alternative key sections and key cylinders in the tumbler and flat key modem, with and without dust covers.

**For FREE Information**  
Circle 395 on Rapid Reply

## DoorKing Introduces New Slide Gate Operator

DoorKing Inc. has introduced a new slide gate operator to the market. The Model 910 is a 1/2 HP commercial unit and is available for shipping now.

All functions of the Model 910 are controlled by a new microprocessor based control board, designed explicitly for the 910 operator, that eliminates troublesome relays, limit switches, and contactors. The programming in the microprocessor allows the operator to automatically adjust both its open and close limit settings and constantly monitors any gate movement and compensates for any gate coasting.



**For FREE Information**  
Circle 396 on Rapid Reply



### American Device Magnetic Lock

American Device Manufacturing Co. has introduced a complete line of U.L. listed electromagnetic locking devices with holding forces of up to 1,200 pounds.

The ES200-Series fail-safe electromagnetic locks can be used to securely lock exit doors, yet will release instantly if there is a power failure or when signaled to do so by an appropriate door control unit. The locks complement American Device's 4000 and 6000 mechanical exit devices for emergency egress.

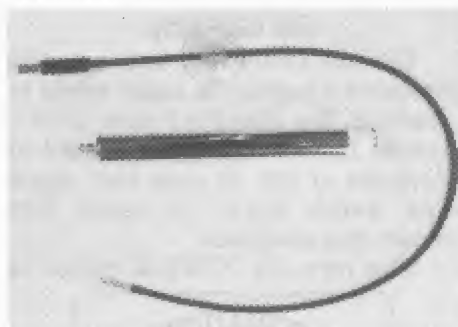


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### Briggs And Stratton Work Light

The Briggs And Stratton work light is now available at your authorized Briggs And Stratton distributor. This handy tool uses 2 AA Batteries and has a 16" flexible wand with a suction cup for car window mounting.

The wand is replaceable and has a bulb which is sealed and will not exceed 103 degrees F. This means not only will the bulb not break when placed in cold water, the wand unit is designed to work for extended periods of time in cold, wet applications.



For FREE Information  
Circle 392 on Rapid Reply

### Von Duprin Introduces A New Shear Lock

Von Duprin, Inc. has introduced a new shear lock with twice the holding force of previous shear lock designs. The new SL4100 series shear lock is the latest addition to the company's Maxhold® family of electromagnetic locks and incorporates some of the same technology used in the 4000 series direct hold lock.

The SL4100 series provides 1800 pounds of holding force for inswinging or outswinging doors and accommodates door clearances up to 1/4". A dual-voltage coil permits field selection of 12 or 24 VDC operation. Other features include built-in voltage surge protection, and a plated armature and electromagnet assembly.



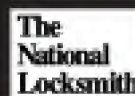
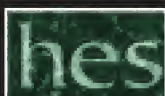
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## Test Article #19

### General Security

To be tested in September 1993 issue. Details in insert in front of issue.

## Corbin 29 Rim Device

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

A majority of the involvement a locksmith has with exit devices is in the capacity of repair and/or replacement. This is usually harder than new installations because the locksmith must work with conditions that may or may not favor an easy installation. And being that most locksmiths are cousins to Murphy, you can bet it won't be easy. This is why it is important to establish a strategy before arriving at the job.

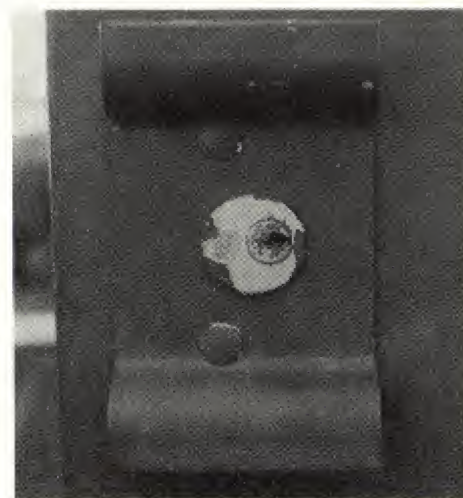
A good overall plan includes evaluating the current status of the opening, developing solutions that address the problems of the opening, and then implementing the chosen solution(s). Follow as this article

walks through a typical exit device service call.

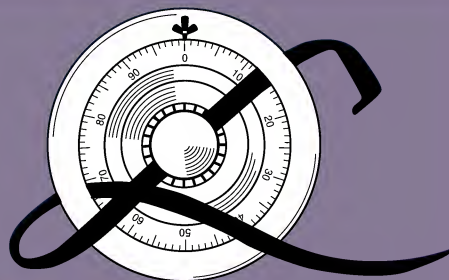
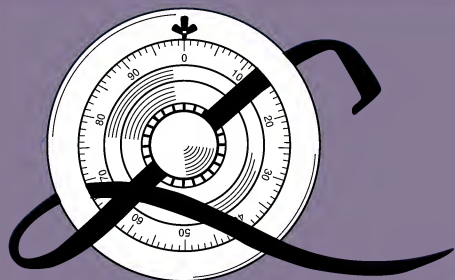
#### Evaluation

Arriving at the site we are informed that the rear door does not latch or stay latched properly. It is a single door with a Corbin 20 (currently Corbin/Russwin ED8400) surface mounted vertical rod device attached. It was a night latch function with a pull handle from the outside (ANSI 03) and includes a doglatching or dogging function (see photographs 1 and 2). While this is not a typical application for a vertical rod device, it does provide this door with two point protection.

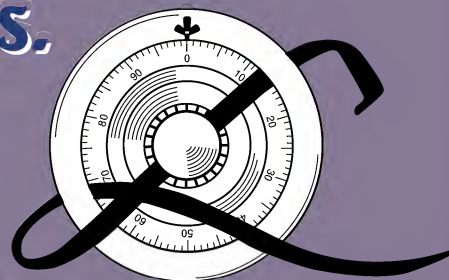
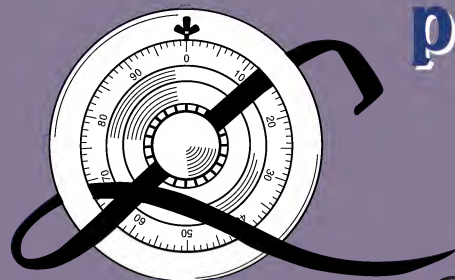
Checking the operation of the unit



1. The exterior trim of the old Corbin exit device night latch function.

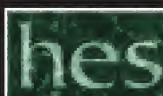


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2. The Corbin 20 surface mounted vertical rod exit device.

showed that, although extremely scarred, it worked well. The door, however, had loose hinges and sagged a little bit, rubbing on the latch side jamb. The threshold also was loose.

Opening and closing the door revealed that the installation of the exit device did not include a bottom strike. Instead the installer let a short lip on the threshold serve this purpose.

The loose threshold, compounded by a sagging door that rubbed on the latch side jamb, prevented the door from latching correctly when left to close on its own. The loose threshold did not allow the bottom latch to operate correctly, leaving the door unsecured.

#### Developing Solutions

At this point there were two basic approaches to the solution. The first involved tightening the door up, reinstalling a threshold, installing a bottom strike, and adjusting the latches.

The second solution was to tighten up the door and then install a new rim style device.

While the use of a vertical rod device on a single door is not an incorrect application, a rim device would surely have offered comparable security and provide a greater latitude for door and/or frame shifting. Installing a new rim device was selected and approved by the customer.

One precaution when replacing door hardware: always replace the old equipment with equal or better than

new equipment. To make comparisons between brands easy the "Lock Hardware and Panic Exit Device" Complete Cross Reference guide is available from Dalax Inc., 1314 Huntington Drive, Richardson, TX 75080, (214) 234-8009.

This device was replaced with the Corbin 29 (currently Corbin/Russwin ED8200) rim device.

#### Implementing The Solution

The first step to implementing the solution was to remove the old hardware (see photograph 3). In many

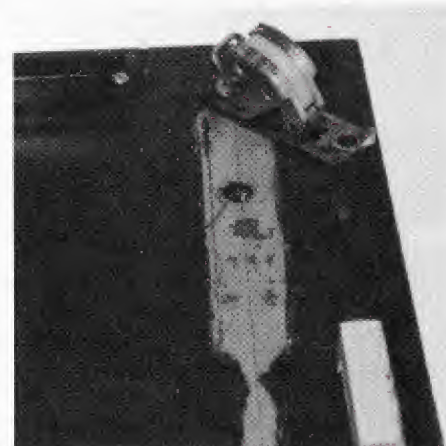


3. John Didier of Anderson Lock Co., Des Plaines, IL begins removing the old hardware.

cases this is quite simple. As expected, however, Murphy does show up. The mounting screws used for the top latch are slightly corroded and hard to get to. After a few tries, however, the screw did break loose (see photographs 4 and 5).

Although not visible in the photographs, all points of the old device were attached using through bolts or sex bolts. This is a good practice as these fasteners eliminate the worry of drilling and tapping metal doors, and the eventual stripping that occurs steel, aluminum and wood doors using standard sheet metal screws, bolts or wood screws.

With the device removed, inspection was made of the old fasteners and the exterior trim and lock cylinder. All seemed in good condition. Next the door was adjust by tightening the hinges and making sure it closed properly. Correcting



4. The fasteners for the top were corroded and filled with lock-tite, making them tough to remove.



5. The fastener for this top latch finally gives way to John's persistence.

closing problems before the new installation is made will not only make the installation easier, but will also prevent future failure and service related problems.

Now, installing rim devices involves three basic operations. First the installation of the trim. Second, installation of the unit itself. And, third, installation of the strike.

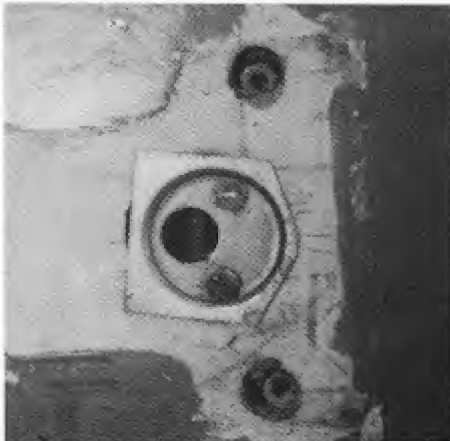
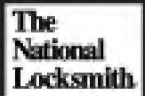
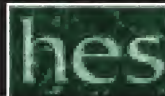
On new installations it is necessary to make and mark all measurements for trim, unit and strike before starting, making sure all measurements are correct. In this installation, the trim from the old device was being used, so most of the measuring was already done.

The backset of the old device slightly exceeded the 2-3/4" recommended by Corbin. Installing the new device in its place meant that the strike would have to be shimmed in order for the device to latch properly.

Holding the new device up to the door, the head was attached to the exterior trim piece, making sure the tailpiece of the lock cylinder fit into the back of the unit properly (see photographs 6 and 7). The Corbin/Russwin head uses only two bolts to secure it to the door (see photographs 8 and 9).

Holding the back of the device up

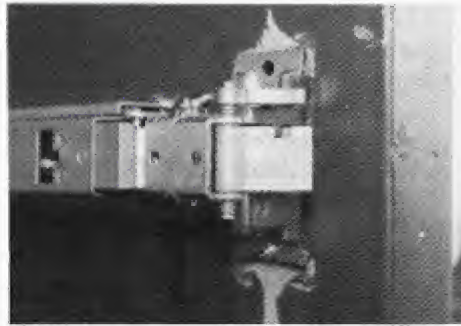




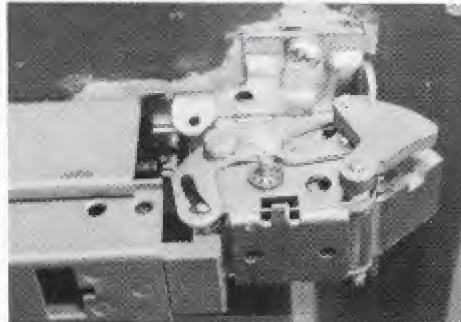
6. Looking at the trim from inside with the old device removed. Notice that the Corbin units use only two fasteners to mount the head size of the device.



7. John begins mounting the device.



8. The bottom bolt screwed to the trim.



9. Installing the top bolt finishes the attachment of the head portion of the Corbin 29 device.

to attach the back end, it was learned that the door had a slight bow to it, and would not allow the unit to sit flat against the door (see photograph 10).



10. The bow in this door did not allow the new device to sit flush. Shims were added to the back of the mounting bracket to accommodate the problem.

The back piece of the old unit was shimmed up to accommodate for this.

Because the fasteners for this side were full of corrosion and lock-tite, it was necessary to clean it out. Using an old door man's trick, the proper tap was put into a drill and reversed in and out of the fastener (see photograph 11).

With the fastener cleaned and rethreaded the back was shimmed and attached to the door (see

# Major

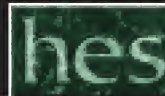
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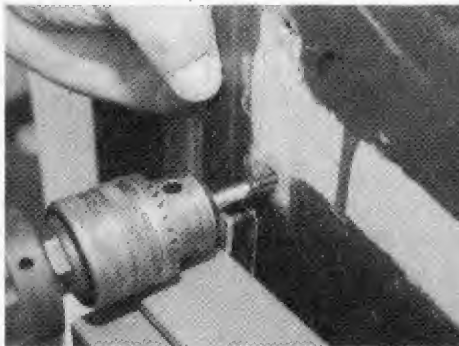
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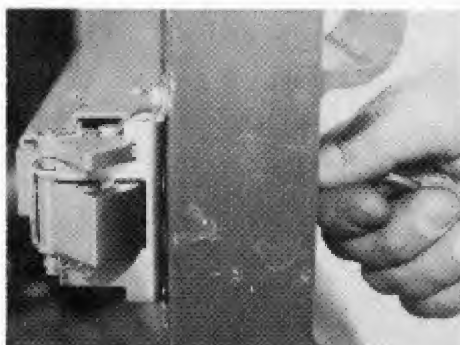


11. While using a drill to tap holes is a common practice, it can sometimes lead to cross-threading, stripping the hole or breaching the tap. Using this method for tapping should be done carefully!

*photograph 12*). The device now securely on the door, proper lock operation was checked before going further (see *photograph 13*). By

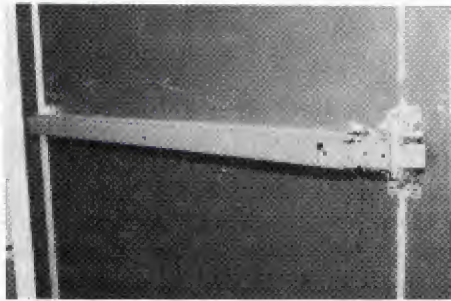


12. Attaching the back mounting bracket and shim.

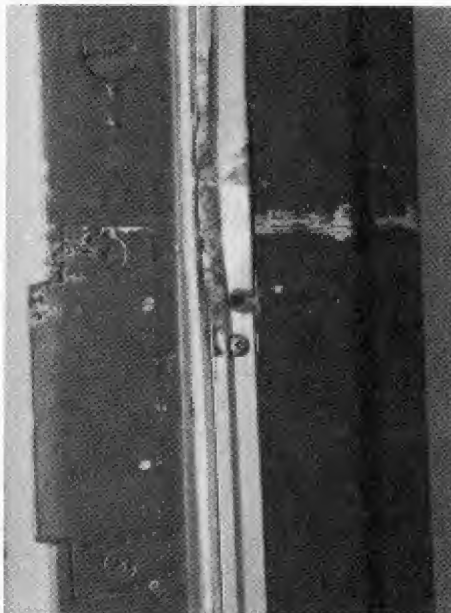


13. John checks his work before continuing. This is a good practice and can prevent errors or problems later that will be harder to correct. constantly checking the operation of the device after each step, errors and adjustments can be made before the unit is all closed up and you're ready to leave (see *photograph 14*).

To install the strike it was necessary to cut a piece of weather-strip out of the way (see *photograph 15*). After measuring where the strike was to be attached (see *photograph*



14. The new Corbin 29 device.



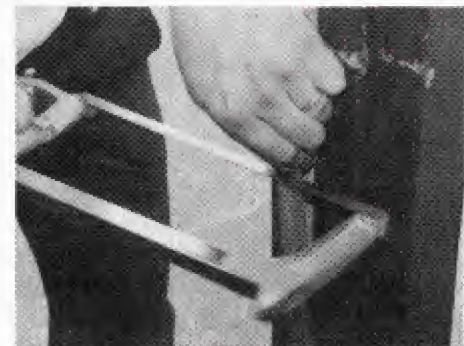
15. Attaching the strike is the next challenge. On this door weather strip needed to be cut away to make room for the strike.



16. John making measurements on the door.

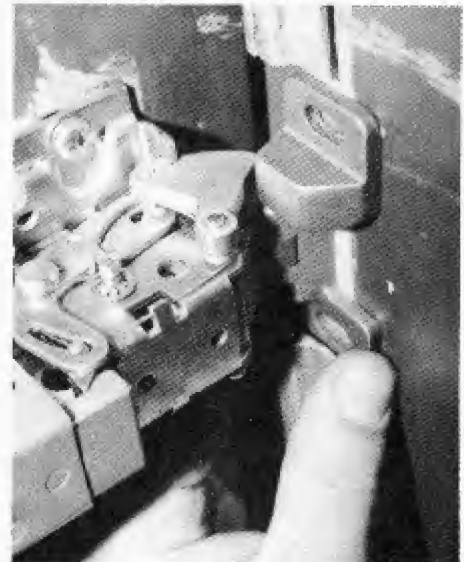
16), the weather-strip was loosened from the frame and cut with a hacksaw (see *photograph 17*).

With the weather strip out of the way, the strike was held in place and



17. After removing some of the screws, John cuts a measured section of the weather-strip away using a hacksaw.

the door allowed to close until the latch touched the strike (see *photograph 18*). At this time the strike was aligned its position marked on the door frame making sure that the deadlatch of the device was centered on the ramp portion of the strike.



18. Aligning the strike with the latch and deadlatch.

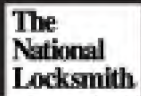
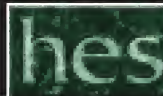
The strike screw mounting holes were drilled (see *photograph 19*) and tapped (see *photograph 20*) into the frame and the strike loosely attached (see *photograph 21*). The door was carefully shut and the strike was adjusted so that the latch fully engaged into the strike when the door



19. Drilling the strike mounting screw holes

Continued on page 28





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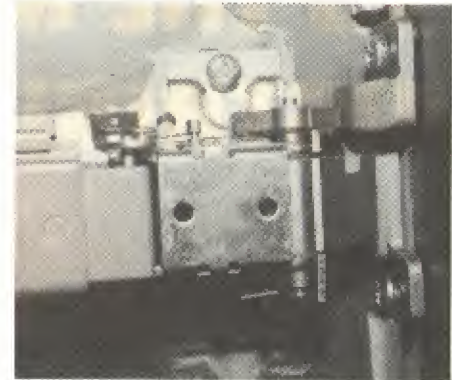


20. Tapping the strike mounting screw holes.



21. The strike attached.

closed and seated against the door stop edge (see photograph 22).



22. Making sure the latch and deadlatch are properly aligned with the strike.

After checking operation and making the final adjustments to the strike, the cover was placed over the head and the operation checked again (see photograph 23). In instances where the device is mounted to close to the strike the cover will hit the strike while closing.



23. John attaches the head cover to finish the job.

This unit operated perfectly. The job was complete! (See photograph 24.)



24. A job well done.

Thank you to John Didier and Anderson Lock Company, Des Plaines, IL, for allowing us to observe the installation. §

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*Test Article #20*  
**Automotive  
Security**

To be tested in September 1993 issue.  
Details in insert in front of issue.

## Ford Probe Ignition Service

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

Servicing the Ford Probe ignition is one of the few service problems that continues to frighten off locksmiths, including those competent in import auto service. And no wonder. Typically, import ignition service involves undoing a few screws to remove a two-piece, clam shell column shroud, revealing the ignition housing. At this point service is simple.

The Probe ignition and housing, however, is not as simple to get to. Despite the Japanese origin (Mazda), the engineering is apparently imported from England, taking on the British characteristic of making service more difficult than necessary (at this point I am being facetious). And instead of removing a simple clam shell column shroud to reach the ignition, the steering wheel and three layers of the dash panel need to be removed (see photograph 1).



1. The steering wheel for the 1988 to 1992 Probe must be removed for ignition service.

Not to worry, however, taking a step by step, layer by layer approach, ignition service is actually much easier than it appears.

Start by removing the steering wheel horn pad. On the 1990 model in this article, the pad is released after removing the horn pad screws found on the back of the steering wheel (see

photograph 2).

Pulling the wheel exposes the first tier in the shroud removal (see photographs 3 and 4). Remove the two screws found at the bottom of the cover (see photograph 5) and slide the piece out towards the rear of the car (see photograph 6).

The next piece to be removed is the instrument cover. Keep careful



2. Remove the horn pad screws found on the back of the steering wheel.



3. Remove the steering wheel nut and...



4. ...use a steering wheel puller to remove the steering wheel.



5. Remove the two screws from the first of three column shroud pieces.



6. Pull the piece straight out, off of the column.

count of the screws and their placement. While we counted 13 in just this one piece, there may be more or less depending on the year (see photograph 7).



7. Remove all the screws holding the dash piece on and carefully pull it forward.

Continued on page 34



Continued from page 30

With the screws removed, grab the panel from both sides and gently but firmly pull it towards you. Do not pull too hard or too far. There are several wire harnesses that need to be disconnected before it can be separated from the dash area.

Pulling the panel from the dash about 6", reach up and disconnect the harnesses (see photograph 8). This model had a total of nine separate connectors. While the connectors cannot be easily plugged into the wrong receptacle during assembly, marking them will make the job faster (see photograph 9).

The final trim piece requires

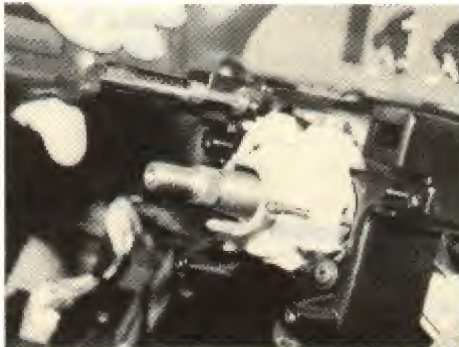


8. Disconnect all the harness connectors.

removing four screws (see photograph 10). Pulling this last piece off gives us



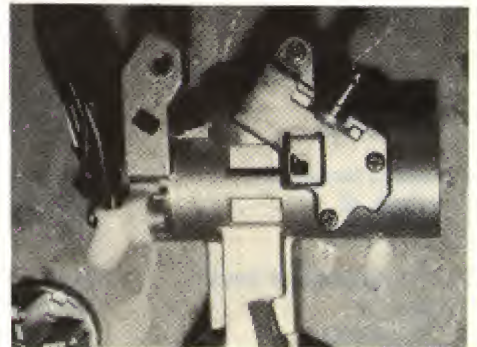
9. Completely remove the piece from the dash area.



10. Remove the four screws holding on the last column shroud piece.



11. Once this piece is completely removed, the ignition assembly is completely exposed.



12. All 1988 to 1992 Probes with manual shift have this keyshifter interlock lever attached to the side of the ignitions. These levers are absent on the automatic models.

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easy access to the ignition housing (see photograph 11).

From 1988-1992, the Probe used the Mazda 6500-7733 codes series, using the X202 keyblank. Models with automatic transmissions use the SL-15 ignition housing and a cylinder that requires the key and plug to be pushed in as it is turned to the off position. Models with a manual transmission use the SL-22 body and have a key/shifter interlock lever attached to the side of the housing (see photograph 12).

Auto Security Products offers replacement ignitions C-20-215 for the automatic, and C-20-216 for manual. Pinning kit A-20-101 is used for these versions. For 1993 models use ignitions C-20-219 for automatic and C-20-220 for manual, and the A-33-101 pinning kit.

To remove the ignition cylinder drill and remove the two cylinder retaining pins. One is located directly on top, or at the 12 o'clock position (see photographs 13 and 14). To make it easier to get the drill bit in tight to the retaining pin, we used a dremel tool instead of a standard drill to make the hole. The second pin is roughly at the 7 o'clock position (see photographs

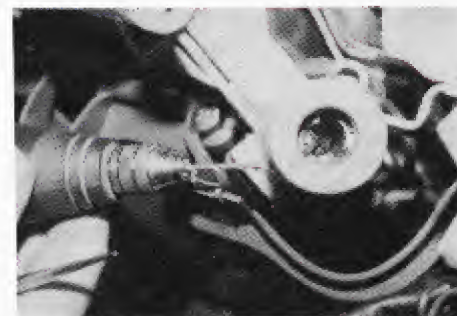


13. Drill to the side of the top pin...

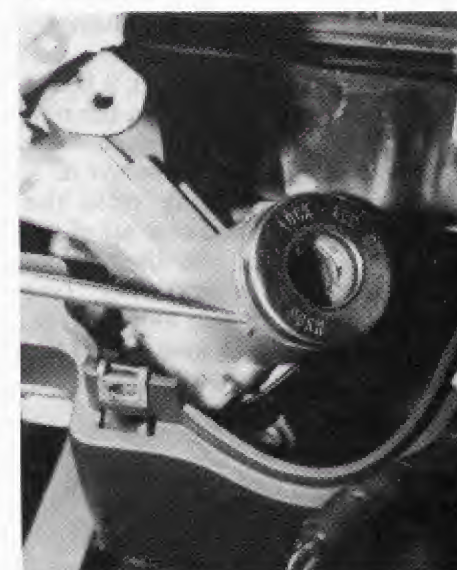


14. ...and pry one of the two cylinder retaining pins out.

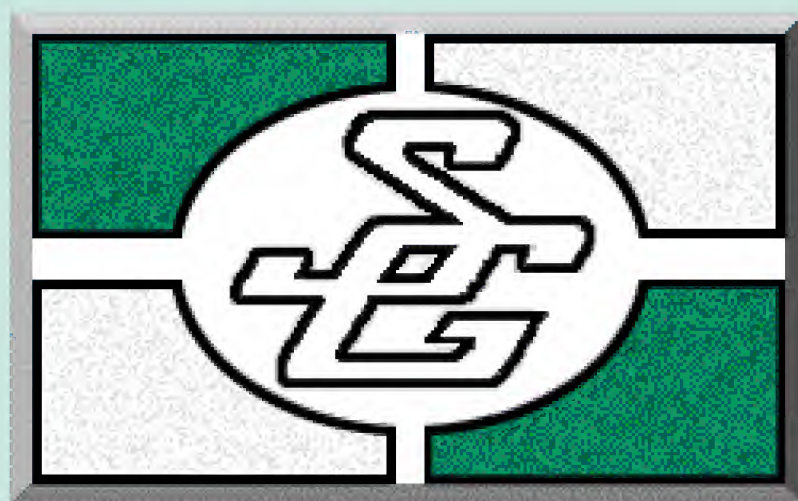
15 and 16). With the pins removed, the cylinder will slide out of the housing (see photograph 17).



15. Drill and...



16. ...pry the second pin out.



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17. This cylinder is the victim of a repossessor's slide-hammer. Notice all the remnants left inside the housing.

To rekey the new cylinder, it is first necessary to remove it from the new housing. Simply drill and remove the cylinder retaining pins to remove it.

To remove the plug from the cylinder, pry the snap ring off of the back of the plug and slide the plug out the front of the cylinder (see photograph 18). Rekey and replace, being careful not to lose any of the pieces (see photograph 19).

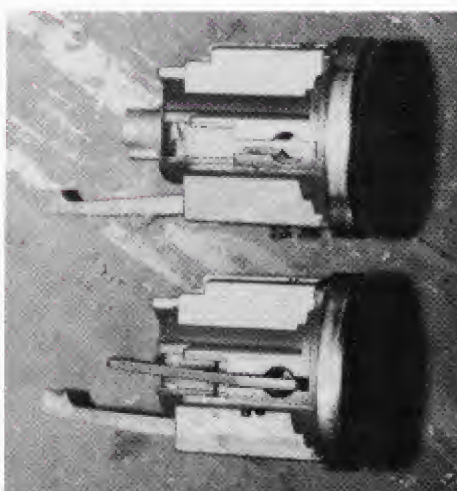


18. After removing the new cylinder from its housing, remove the snap ring that holds the plug in the cylinder.

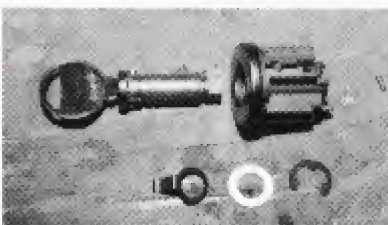


19. At this point the plug can be rekeyed.

As seen in photograph 20, the automatic and manual cylinders are almost identical. In fact, the only difference are the few extra parts of the automatic model, used for the push-in-and-turn activation of the key/shifter lock out mechanism. Except for these few parts, the cylinder, plug and steering wheel lock lever are identical to one another (see photographs 21 and 22).



20. Except for a few components, the cylinder for the manual transmission (top) is identical to the cylinder for the automatic transmission (bottom).

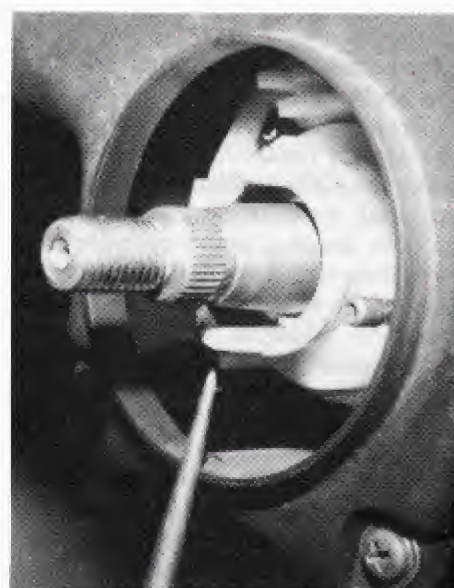


21. While the plug and cylinder are the same for the automatic and manual transmission models, the automatic adds a few more components to create the push-in-and-turn operation of its ignition assembly.

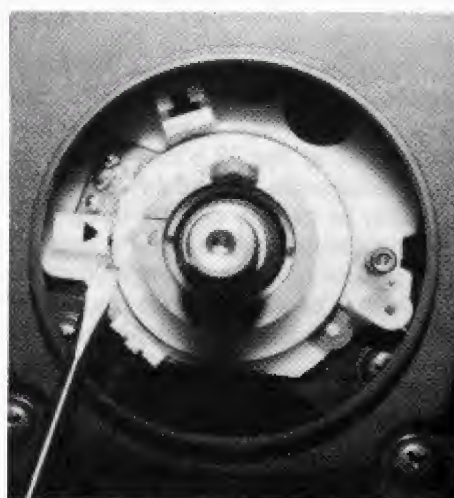


22. The lever releases the key and plug to turn to the off position when the plug is pushed in. Without this lever and action, the key cannot be turned to the off position.

During reassembly, there is one precaution while replacing the steering wheel. On the column the turn signal turret will have two prongs or legs sticking up (see photograph 23). With the front wheels in the straight forward position, align arrow on the turret with the arrow on the signal assembly body (see photograph 24). Now replace the steering wheel making sure the legs on the turret pass through the affiliated holes on the steering wheel (see photograph 25). §



23. The legs on the turn signal turret.



24. Align the arrow of the turret up with the arrow from the turn signal body before replacing the steering wheel.



25. The legs of the turret must be placed into these holes on the steering wheel.



## Test Article #21 **Electronic Security**

To be tested in September 1993 issue.  
Details in insert in front of issue.

# Doors And Frames

*"This article is part of our Security Certificate Program. In a future issue, the content will be tested."*

Last month we covered some of the physical characteristics of electric hardware, including the more common hardware ratings. Correct hardware selection is not limited to the rating of the hardware, however. The dimensional and structural aspects of the installation also need to be considered. For while the type of unit that is chosen may suite the application, if it can't be mounted to the door it can't be used.

Therefore, before making any decision on the type of hardware to use, survey the opening onto which the device is being applied. Make a chart or take notes that include these four aspects of the opening:

1. The door and frame type. This includes the door and frame material (steel, wood, aluminum), the door style (double door with one active leaf, double door with both leaves active, single door, etc.), the door handing (right hand, right hand reverse bevel, center hung, etc.), how and to what the frame is mounted (mortar filled, red brick, mortar brick, wood or metal stud and drywall, etc.), the bevel of the door edge (beveled, nonbeveled, radiused), and other factors surrounding the door and frame of the opening (are there sidelights or vision lights, are they fire rated, is it hollow or solid core, etc.)

2. The physical condition and operation of the door and frame. Before making any type of installation we need to check to make sure the door operates properly. Note any problems with opening and closing, including latching problems, door sticking, loose frame, the condition of the hardware, etc.

3. The existing hardware used on the door and frame. Take note of what hardware is currently used on the door. Many times it is necessary to change the function of the hardware or add a door closer. We also need to

make sure the electrical hardware we are considering is compatible to the existing hardware. Mark down where and how the hardware is mounted to the door, including strike plate type and size and door prep holes. Include descriptions of all hardware including hinge types, chains, latch guards, etc.

4. The door and frame dimensions. Finally, we need to consider the specific dimensions of the door and frame. This determines if the electric device we wish to use can actually fit the door and application.

This briefly covers the things to look for before deciding on the electrical equipment used. Now let's cover a few of these conditions in a little more detail

### Door Style

Knowing exactly what type of opening we are dealing with allows us to anticipate conditions peculiar to the type of doors and frame in that opening. It helps us determine the possible kinds of fasteners and tools required for the job, as well as any conditions affecting the electrical hardware chosen.

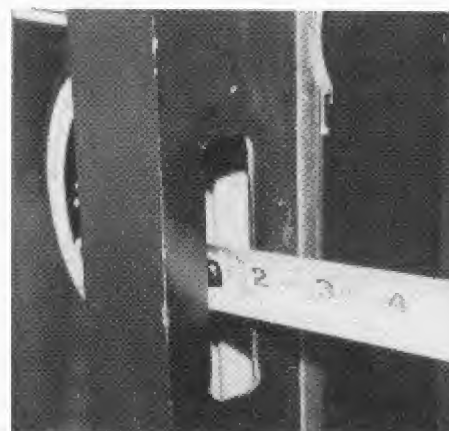
The frames on steel doors and frames, for example, often have a small box directly behind the strike plate cut out. This box forms a cavity that prevents mortar from filling in the strike hole during frame installation (see photograph 1).

Should a strike need to be installed, not only does this box need to be cut away or removed, but any mortar as well. Also, certain style strikes will accommodate such a frame and installation.

Aluminum doors and frames, on the other hand, present a different set of problems. The most common of which is making sure that the frame, usually an aluminum tube around 2" deep, is deep enough to accept a strike (see photograph 2).



1. This is a common mortar filled steel frame. If an electric strike is to be installed here, consideration must be made for removing both the steel strike cup and the surrounding mortar fill.



2. the shallowness of this aluminum frame is typical.

Some aluminum doors are center hung and swing in two directions. This door leaves two problems to

*Continued on page 40*



*Continued from page 38*

consider: most electric hardware cannot accommodate a door that swings in both directions, and because most hardware is designed for a door and frame that is flush on one side, special mounting brackets may be needed for electromagnets and extended lips added to electric strikes (the dimensional concerns of an electric strike and an electromagnet is covered later in this series).

Wood doors and frames offer their own problems with the need to cut metal and/or wood studs, cutting the wood trim to accommodate a strike lip, or finding enough base or support in the top frame and header to accept an electromagnet.

Some instances may reveal a hollow core door, making it difficult to attach hardware to the door without using special fasteners or brackets.

Noting the material and construction of the door and frame on which you are working is the first part of the battle.

#### **Door Operation**

If the door doesn't shut or open

correctly before electric hardware is added, it will seem to operate even worse afterwards. Normally, customers are used to a door that sticks a little bit or doesn't latch without a tug. Most often these doors are left open during the day, and little attention is given to its condition.

Once electric hardware is added, however, there is an expectation that the door will close tightly and correctly without aid. Unfortunately, unless the door is adjusted or repaired, these problems prevent the electric hardware from latching or locking correctly, rendering the opening unsecured, and little better than it was before the hardware was installed.

Therefore, it is necessary to correct all door problems before installing the hardware.

Common problems include hinge sag, hinge bind, bowed door, frame header or jambs, and the door and frame being out-of-plane. Many of these problems can be corrected by the locksmith before hardware installation.

Hinge sag is where the door seems to tilt down from the top hinge. Many

times the door will rub against the frame at the top, latch-side corner or on the threshold at the bottom. The most common result of hinge sag, however, is the misalignment of the latch or deadbolt and the strike. If an electric strike is installed there will be latch alignment problems, preventing the door from latching correctly.

There are several reason for hinge sag.

The hinges may be worn or damaged allowing the door to sag. Or the hinge screws may simply be loose.

On metal and aluminum doors and frames, the hinge plates may be rusted or bent. On wood doors the top of the hinge jamb may not be fastened tightly.

If these problems are not severe they can be corrected by replacing hinges, shimming the hinges or better securing the top of the hinge jamb.

Hinge bind is where the hinges (or a hinge) fully close(s) before the door is fully closed or latched. Ideally, left at rest in the closed position, a door rests comfortably against the door stop without the need for a latch.

A door with hinge bind, on the other hand, pops open and will not

*Continued on page 42*



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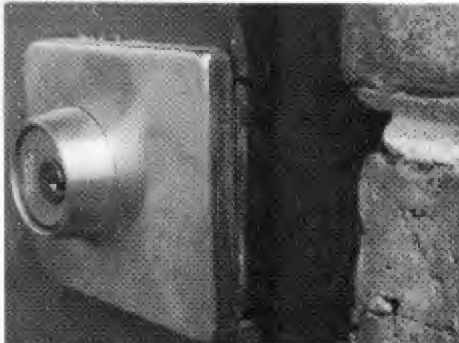
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Continued from page 40

stay resting against the door stop (see photograph 3). If this condition exists where an electric strike is involved several problems may appear. The door may not come to a latching position, or the pressure applied to the lip of the strike from the latch, may cause the strike to bind, not allowing the strike to release the latch.



3. Suffering from a severe case of hinge bind, this door does not comfortably rest on the door stop edge.

With an electromagnet, the armature may not seat or seat correctly, leaving the door unsecured.

The answer here is not to adjust the door closer so that it slams the door. Instead, proper shimming of the hinges can move the hinge(s) into a position that allows the door to relax and rest against the door stop.

Many times the problem is not the hinges, but instead the bowing of the frame. Hinge bind and sticking are common symptoms and usually occurs as a result of rusting frames, loose anchors, the building settling, etc. If the problem is not severe some creative shimming can solve the problem. Otherwise, it may be necessary to replace the door and/or frame (see photograph 4).

Another common problem is where the door and the jambs are not in the same plane. This problem is easy to identify during closing of the door. If the door or either one of the jambs are not in the same plane, either the top or the bottom of the door will hit the door stop edge first, leaving a gap between the door stop edge and the door at the other end.

If the problem is caused by loose anchors or a shifting jamb, it can usually be repaired very simply by moving the loose jamb back into the same plane as the door and other jamb, and then refastening it. In some instances, additional brackets may be necessary.



4. Severe rusting problems may necessitate the replacing of an entire opening before an access control device can be added with any confidence in its ability to operate.

For severe problems it may be necessary to remove and reinstall or replace the entire frame and door. If door and frame work is not something you wish to do, call in someone who does. In any case, make sure that the door is functioning properly *before* the electric device is installed.

#### Compatibility with Existing Door Hardware

There are two considerations in evaluating the existing hardware of an opening and the electrical device to be used. First, is the existing hardware compatible with the changing function of the door?

Remember, the reason an electrical device is being placed on the door is to change the way in which it is being used. If the function of the existing hardware does not accomplish this objective, the hardware needs to be changed, or more added.

For instance, a door may have a knobset with the entrance function. Once unlocked, the knob stays unlocked until manually relocked from an inside button. If an electric strike is added to control this door, anyone entering can turn the button and leave the door unlocked. Of course, leaving the door unlocked negates the use of the electric strike.

It's obvious the function of this door knob is not going to fit the function of the door. It is necessary to change the knob's function to either a

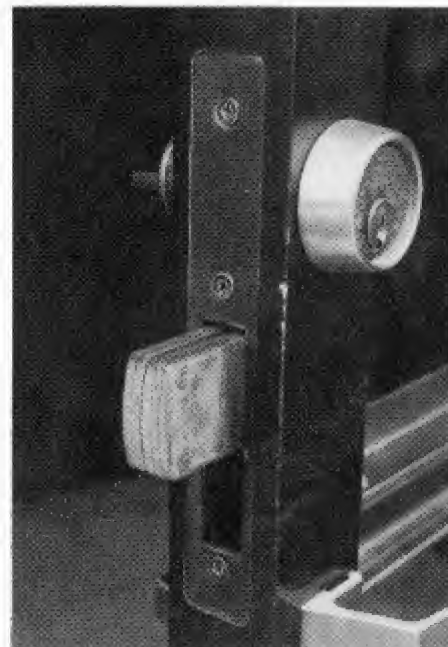
storeroom function or a classroom function. With a storeroom function the lock is always locked from the outside, accessible with a key only, relocking when the key is removed.

The classroom function allows the door to be locked or unlocked at all times, and is operated by a key only. If a door is to open during certain hours, authorized personnel with that key can unlock, and leave unlocked, the door. During the other hours, the lock can be relocked and left locked using the key.

Another thing to consider is, how will the door latch? If the door can be left open, how effective will the new



5. With this as the only lock on the door, what kind of changes do you think may be necessary to install an access control system on this door?



6. Aluminum doors many times need to have the hardware changed so that an electric strike can be used. If that is the route chosen, it is necessary to determine the backset and door edge bevel of this lock as well as the frame specifications so the proper strike can be purchased.



Continued from page 42

locking device be? Often times it is necessary to add a door closer.

Second, is the electrical device compatible with the hardware used. Electric strikes are made to fit a variety of hardware, including mortise locks with 3/4" throw latches, deadbolts, and rim devices. Electromagnets may need to fit around a door closer. An electric mortise lock or cylindrical knobset will need some sort of device to transfer the electricity from the frame to the door. What type of transfer

device will best suite the door and frame? (See photographs 5 and 6.)

#### Door and Frame Dimensions

Finally, we need to make sure that the electrical device will physically fit the door and frame. Following are the measurements that are critical for most devices:

- Door width, height and thickness.
- Door edge bevel. Doors edges will come beveled for the hand of the door. Many double doors will have a radiused edge. (See illustration 7.)
- Reveal. This is the measurement from the inside face of the door to the

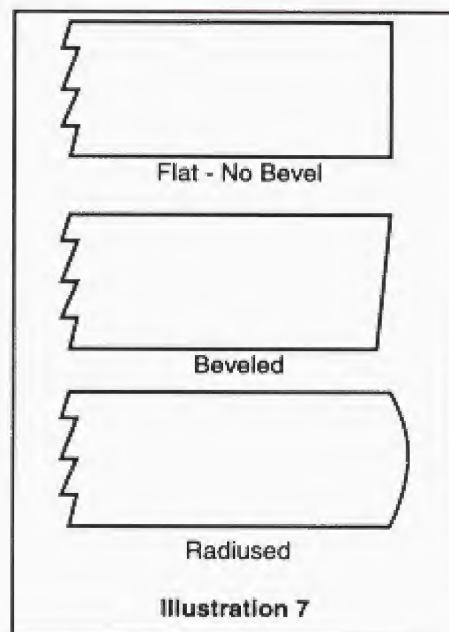


Illustration 7

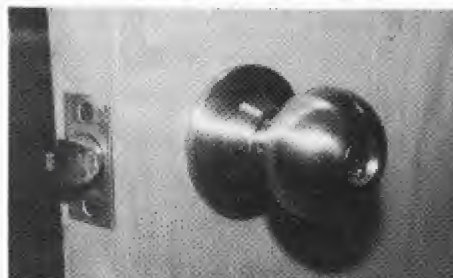
edge of the frame.

- Door stop width.
- Door stop height.
- Frame face width.
- Frame width.
- Strike plate prep.

Of course, knowing exactly what to look for in an opening is more apparent as you become experienced with different applications and different devices.



8. This solid steel, mortar filled frame comes complete with a radiused face and an extended lipped strike plate and cup. Cutting for a new strike would take hours and specialty brackets would have to be made for a magnetic lock to be mounted to the radiused frame.



9. To solve the problem, an electrified cylindrical lock was used.

Continued on page 46

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Continued from page 44

Next month we will look at the dimensional characteristics for electric strikes and electromagnets and show how they are associated with the measurements taken from

the opening.

Following are two oddball situations. Decide how you would handle them.

Door situation one: (See

photographs 8, 9, and 10.)

Door situation two: (See photographs 11 and 12.) §



10. A door cord was used to transfer the power from the frame side to the door.



11. How about a Dutch Door.



12. This particular door, found in a hospital pharmacy, was alarmed on both sections, but how would you solve this for access control?



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# STOPPERS



The *National Locksmith* magazine would like to welcome you to this year's ALOA show whether or not you are attending in person. In this section of Showstoppers you will find products, many of them brand new, to be exhibited this month in Chicago.

Along with a photograph of each item is a brief description and a Rapid Reply number. If you are with us in Chicago, please stop by the booths of those manufacturers who interest you. If you are

not making it to the show, circle the appropriate Rapid Reply numbers on the Rapid Reply card in the rear of this magazine. That way you still get information about these products.

Of course, not everything to be exhibited at the show would fit here, so be aware there's a lot more to see. To the best of our knowledge, the booth numbers on page 66 are accurate. However, some of them may change after we've gone to press.

**This year, come visit the staff of  
*The National Locksmith* magazine at Booth #527**

## 84 Series Padlock From Abus Lock

The 84 Series "Tough Security" Line of "All Weather" padlocks from Abus Lock Company are attractive and built to withstand the most adverse weather conditions while providing dependable security.

The body and double-locking shackle are solid brass and feature a rugged, protective black vinyl sheath over the entire body. Bronze springs in the cylinder assure rust-free operation.

All locks carry a lifetime warranty.



Booth # 1004

Circle 271 on Rapid Reply

## Adams Rite's Electric Strikes

The third generation of electric strikes from Adams Rite is called the 7000 Series. Compared to the 7800 Series (which will continue to be available) the 7000 Series features a smaller case (approx. 1" x 3") with a smaller but powerful solenoid mounted internally. Face-plate/lip dimensions are available in all the sizes of the 7800 Series and with bolt cavities to accept either Adams Rite, cylindrical or large mortise latches.



Booth # 217

Circle 272 on Rapid Reply

## Adrian Steel Van Interiors

Adrian Steel Company offers a complete line of shelves, bins, drawer units, cabinets, security partitions and ladder racks for full size and mini vans. The modular components are designed by Adrian to give locksmiths and security systems installers optimum flexibility for outfitting service van interiors to meet their special needs for storage of parts, tools and equipment out on the job.

Components are tough, strong, welded steel construction, and are easy to install.



Booth # 151

Circle 273 on Rapid Reply

## Alarm Lock's Panic Devices

Now you can control unauthorized exits with Alarm Lock's new panic devices. Trying to open an emergency exit door will trigger an immediate alarm, but the door won't open for 15 seconds (the maximum delay permitted by NFPA life safety code). In compliance with code, however, these devices permit instant egress in case of fire or whenever the fire system is tripped.

Attractive Alarm Lock Model 265 Paddle Arm and model 715 Bar and Channel panic devices both incorporate this field-proven "Time Out" feature.



Booth # 812

Circle 274 on Rapid Reply



### Alarm Monitoring's Personal Service

At Alarm Monitoring Services, Inc. a UL approved facility, dealer-clients enjoy personalized service uncommon with giant central stations. No subscribers are contracted directly by AMS. AMS can answer subscribers' call with the dealer's company name. What's more, AMS clients don't have to forfeit "big" station technology for "small" station conveniences.

All AMS monitoring equipment is dedicated and integrated. AMS newest service is two-way communication with subscribers.

Booth # 443

Circle 275 on Rapid Reply

### Allied Gary's Floor Safe Line

*Consumer Digest* recently awarded Allied Gary International's All American floor safe model BC-9 their prestigious "Best Buy" award! It features two interchangeable doors and three bodies to give you the flexibility you need. Cladded units are also available.

If your customer has special safe requirements, Allied Gary can custom design and build the safe per your customer's requirements.

Circle 276 on Rapid Reply

### All-Lock's ALOA Sweepstakes

All-Lock is running a sweepstakes promotion at the ALOA Show in Chicago.

Locksmiths are invited to stop in All-Lock's booth to view the company's latest products including the newest additions to the recently announced import car lock program.

All-Lock's quality products are assembled in Selma, Alabama, and ready to ship.

The sweepstakes, which requires no purchase to enter, has a large screen TV, cash and merchandise among the top prizes. Entries will be accepted on the show floor and winners will be announced at the show.



Booth # 311

Circle 277 on Rapid Reply

### Ambassador Adds Super Strong Safes

Ambassador Safe Company has expanded its existing product line of one and two hour fire safes to include to latest generation of U.L. Listed TL-30 and TL-30x6 Super Strong Safes. The Super Strong Series offers a minimum of one hour fire protection while simultaneously providing six-sided protection against conventional tools and power tools.



Booth # 901

Circle 278 on Rapid Reply

### Amsec's Composite Safes

Recently AMSEC (American Security Products Co.) introduced the new AM-VAULT TL-15 and TL-30 two hour fire rated composite safe. It comes in seven single door models and one double door model ranging from 1.8 cu./ft. to a very large 36 cu./ft. of storage space.

It's massive door and body is constructed of outer and inner steel plates enclosing a unique, high density fire and burglary resistant composite material.



Booth # 411

Circle 279 on Rapid Reply

### American Lock's 10 and 30 Series

American Lock Company's 10 and 30 series fulfills the need for superior performance with premium security features such as solid body construction shackles, five pin tumbler and double ball locking mechanism. The 10 and 30 series are available in 1-3/4" and 1-1/2" wide body.

Available in carded and boxed product, this modestly priced product series enhances American Lock Company's durable "all purpose" product category.

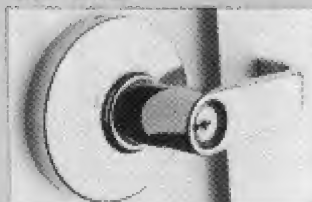


Booth # 813

Circle 280 on Rapid Reply

### Arrow's New "L" Series Lever

As the newest addition to the Arrow lever family, the "L" Series cylindrical lever lock is recommended for use on light to medium frequency doors in commercial applications. The new series meets ANSI A156.2, Series 4000, Grade 2 and is available UL listed for A labeled (3 hour) doors. Steel, brass, and alloy construction is featured, with independent torsion springs and patented anti-sag levers. The lock requires the standard door preparation using concealed screw attachment. The L Series conforms to accessibility code requirements and complements other Arrow lever locks.



Booth # 731

Circle 281 on Rapid Reply

### Bell's Quality Detection Mirrors

All steel backing frames makes Bell Detection Mirrors, a quality manufacturer of a complete line of U.S. and foreign-patented Bell Detection Mirrors. These mirrors can be used to protect industrial establishments, public buildings, government installations, schools, hospitals and also, retail operations, where the problems of accidents, security and pilferage exist. The mirrors are available in round and rectangular convex glass, flat glass and metal.



Booth # 926

Circle 282 on Rapid Reply



### Blackhawk's Leasing Program

Now you can lease software from Blackhawk Products. Get seven software programs designed for locksmiths for one low price per month. You don't even need to use all of them to get your money's worth.

Codes on disc, key blank cross-references (deluxe) and code book index are for all locksmiths. Fill the combination and reverse domestic auto are for automotive locksmiths. Use the pin chart for interchangeable cores if you handle Best type cores, and remote control for the ITL 9000 if you have the ITL 9000.

Booth # 1012  
Circle 284 on Rapid Reply

### Brella Corp.'s Security Device

Brella Corp. has developed a patented new security device, "The Hook," for use on outward opening mobile home doors. The Center For Applied Technology at Clemson University assisted in market research. There are more than 7,000,000 mobile homes in use in the United States. Priced about the same as a standard deadbolt, The Hook requires no extra cost installation. It fits both right hand and left hand opening doors.



Circle 285 on Rapid Reply

### Briggs & Stratton's Magic Touch™

Briggs & Stratton Technologies offers a vehicle anti-theft system that is virtually effortless to install and use. The Magic Touch™ Security System can be installed in minutes using only a wire stripper and test light. One wire is cut and a black switch pad is placed anywhere inside the vehicle that the owner chooses, out of view. To start the vehicle, simply touch the switch pad. The Magic Touch™ Security System makes vehicles hot-wire proof and prevents theft by steering column breakage.



Booth # 539  
Circle 286 on Rapid Reply

### CCL's Line Of Displays

CCL Security Products has designed a series of six displays that you can hang on walls or stand on your counter top. The displays measure 15-1/2" x 15-1/2" and feature the actual products along with descriptive copy.

The displays that you can select from are: 1) Rekeyable cabinet and door locks; 2) handle and panelboard locks; 3) Cam locks; 4) Rekeyable padlocks; 5) Pin tumbler padlocks; and 6) Sesamee keyless padlocks.



Booth # 632  
Circle 287 on Rapid Reply

### Corbin Russwin Lever Lockset

Corbin Russwin introduces the new mid-priced CL3600 Series heavy-duty cylindrical lever lockset certified as ANSI Grade 1. The lockset is designed to exceed tough operational, security and finish standards as well as meet today's code requirements with full compliance of ANSI A117.1 Accessibility for the Physically Handicapped. Aesthetically pleasing in a wide range of architectural finishes, the CL3600 Series is ideal for new or retrofit commercial, institutional and multi-family applications.



Booth # 607  
Circle 288 on Rapid Reply

### New Door-Aid Version

The newest version of Door-Aid is the "S" (for "short") model, which at 5" x 5" x 10" is the smallest retrofit automatic door operator available. The device utilizes the same high-torque industrial grade gear-head servomotor as in previous models.

Mounting has been further simplified. Due to its reduced size it can be installed above the header in most instances. The Door-Aid B1000S is capable of up to 30 lbs of push force.



Booth # 551  
Circle 289 on Rapid Reply

### Door Systems' Model 215ND

The Digital Door Lock® 215N is a totally mechanical keyless access control for use with narrow stile door deadbolt devices.

The 215ND is installed onto the exterior surface of the door using two machine screws that go through the door for greater installation strength and security.

The model 215ND from Door Systems Inc. is available in all finishes.



Booth # 804  
Circle 290 on Rapid Reply

### Dorma Adjustable Door Closers

As a simple solution to accessibility code compliance, Dorma Door Controls has enhanced its 600 Series door closer line to include adjustable spring power and a resized closer body.

The line now features two ranges of spring adjustment. Because spring power is adjustable with the turn of a hex wrench, the door's closing force can be optimized while it retains an opening force low enough to meet barrier-free requirements.

Booth # 441  
Circle 291 on Rapid Reply



### Dremels Heavy-Duty Flex-Shaft

Dremel's new 7365 Heavy Duty Flex-Shaft Kit combines high-speed with the finger-tip precision necessary for all locksmith jobs. The tool is the latest addition to the Dremel rotary tool line, which has been cutting, grinding, polishing and drilling in locksmith shops for 60 years.

Its solid-state, foot-operated speed control allows hands-free speed adjustment from 0-20,000 RPM.



Booth # 331

Circle 292 on Rapid Reply

### Dugmore & Duncan's New Pull Handle

Dugmore & Duncan Inc., a distributor of security hardware, has a pull handle available designed to be installed with existing double cylinder auxiliary deadlocks of various manufacture. This product is especially useful in situations where a simple, rugged, and inexpensive arrangement is desired.



Booth # 339

Circle 293 on Rapid Reply

### Double Zipper Case From Ellis

A lightweight double-zipper tool and briefcase made of tough long lasting Cordura® has been introduced by the C.H. Ellis Company as their style number 670. Self healing nylon zippers are designed for years of rugged operation and the case may be carried by tough nylon web handles with suede padded handle wrap or by an optional padded shoulder strap for hands free convenience.

The tool case section holds 36 tools in well arranged pockets plus a hand held instrument. The briefcase section has three internal document pockets and clip board.



Circle 294 on Rapid Reply

### Emergency Road Service Dispatch

Emergency Road Service, Inc. is one of the largest roadside dispatch organizations in North America offering centralized nationwide roadside assistance 24-hours a day, 365 days a year. Service is available on virtually every street, highway, Interstate and country lane in the entire United States and Canada, for every make and style of automobile, van pickup or light truck, recreation vehicle, motorcycle or heavy-duty truck. The majority of their business comes from automotive manufacturers, however, other clients include membership associations, rental car agencies, and financial/insurance institutions. The organization is made up of an extensive network of independent service contractors.

Booth # 241

Circle 295 on Rapid Reply



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### Federal Lock's Solid Steel Padlocks

Federal Lock Company introduces the solid steel padlocks 100, 200, and 300 Series padlocks. These solid steel padlocks are built to provide enduring protection against the most abusive forces.

Standard features include: 1-3/4" /45mm, 2" /50mm and 2-1/2" /63.5mm Wide hardened solid steel lock bodies, quality chrome plating, double ball locking mechanism, and hardened steel and alloy shackles".



Booth # 421

Circle 296 on Rapid Reply

### Folger Adam's LeverTrak Handle

The first stage in the development program for the LeverTrak Lever Handle Guide Sets has been announced by Folger Adam. Designed for new or existing applications the sets overcome the problems with abuse of lever handles on high frequency doors.

By nature, lever handles allow excessive pressures to be transmitted to the lock mechanism, shortening service life. The LeverTrak, however, controls over-travel through the use of an adjustable stop, thereby extending the service life of the lock.



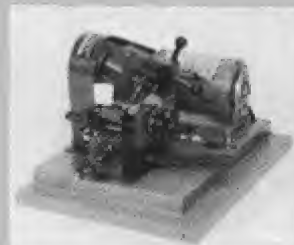
Booth # 911

Circle 297 on Rapid Reply

### The Framon No.2 Code Machine

The Framon No. 2 code machine is an accurate and rugged code machine. Standard equipment on the No. 2 is the depth and space manual containing cutting information on over 1600 key series, including Medeco Biaxial, Assa, safety deposit box keys, and practically any cylinder key in use today. Also included are three cutters (standard, Medeco, and a .045" slotter), dial calipers, and five spacing blocks.

The No. 2 is able to hold tolerances of .001" consistently.



Booth # 1117

Circle 298 on Rapid Reply

### Futronix Presents Body Alarms

Futronix has come out with new personal safety and home alarm products that can be added to your store. Body Alarms are made of tough polycarbonate plastic, they have a one year limited warranty on parts and labor and they emit 130 decibels of sound. Body Alarms with strobe light are also available.

Futronix also has Back-up, a powerful non-lethal weapon made from oleoresin capsicum an organic compound derived from the oil of the hot red pepper plant.



Circle 299 on Rapid Reply



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Exit Devices.***

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### Gardall Adds Cash Register Tray Safes

Gardall Safe Corporation announces the introduction of a new line of cash register tray security safes. The new line of security chests gives Gardall dealers an economical way to provide their customers with a safe that protects both deposits and cash register trays at the same time. The Gardall model FL2522 is equipped with a front loading depository that drops into a cam locked compartment.



Booth # 518

Circle 300 on Rapid Reply

### Hazelton's Key Blanks

Hazelton Key Mfg. offers factory direct, personalized key blanks at very reasonable rate with very quick turn around, and no minimum order size. They also carry inexpensive padlocks, household and commercial locks.

Hazelton is a small company that offers clients flexibility. If they don't offer it, a product, just ask, and they'll get that product just for you.

Circle 301 on Rapid Reply

### Hill Security's Okay Key Safe

Since 1959 locksmiths, prison guards, security people, postal workers, janitors and policemen have carried their keys on Okay's Key Safes. It is secure, convenient, handy and dependable.

They are very popular with professionals and business men as well as tradesmen, because they eliminate pocket wear and are unconditionally guaranteed.



Booth # 611

Circle 302 on Rapid Reply

### HMC Int'l Div.'s Pressure Gauge

Please note that Howard Manufacturing company has changed its name to HMC, Int'l. Div., Inc. to better meet the worldwide requirements of its customers.

ADA (The Americans With Disabilities Act) the Uniform Building Code, ANSI Fire Door Code and Uniform Fire Code all contain specific requirements regarding door opening and/or closing force. Additionally, the ADAAG specifies maximum slope requirements for ramps.

HMC Int'l. has developed a new Door Pressure Gauge (DPG-20) to measure force between 0-20 lbs. This gauge also provides force readings in Newtons and Kilograms.

Another product offered is the 20-12 SM slope measuring device and level.



Circle 303 on Rapid Reply



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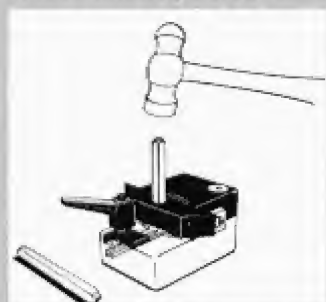


### HPC's New Stamp Aligner™

HPC's new Stamp Aligner™ (SA-7) solves the problems locksmiths have stamping numbers on keys.

The Stamp Aligner™ holds standard 3/32" and 1/8" number and letter die stamps so that figures may be stamped on keys in an exact straight line with exact spacing between figures.

Each character stamped into the key will be straight, spaced evenly and aligned perfectly. When the die stamps are all struck with the same force the result is a key that looks factory stamped.



Booth # 316, 317

Circle 304 on Rapid Reply

### Jiffy Suggests Updating Your Tools

Jiffy Lock Tools reminds the locksmith that good tools don't cost — they pay. Both in time saved and in job quality. They also pay in the customer's confidence in your operation.

Modern locksmiths can find many new tools that may be faster than the old methods. Using these tools helps them to get a lot of work out in a short time and shows your customer that you are a modern craftsman.

This is the age of advanced technology and you have to show that image to your customers by updating your tools.

### Kustom Key Debuts LaKey

Kustom Key, Inc. officially introduces "LaKey" at this year's ALOA show. LaKey offers attractive embossing designed to appeal to the public for their personal use. Their large size makes them especially easy to manipulate for those who are handicapped.

Made of quality brass, LaKey is available in the following keyways: SC1, KW1, AR1, WK1, DE1, WR3, and Y1.



Booth # 239

Circle 306 on Rapid Reply

### New Titan Line From Kwikset

The new Titan line of door hardware has been designed to spearhead Kwikset's drive into higher marketing ground. The targeted mid price sales arena currently generates almost half of the total dollars spent annually for residential locksets in the U.S.

The Titan line is aimed at the burgeoning numbers of consumers who increasingly demand maximum home protection, durable value and impressive quality.



Booth # 519

Circle 307 on Rapid Reply

### LCN Offers ADA Solutions

LCN Closers offers the broadest line of powered and manual closers for entrances used by people who are disabled. All models use a heavy duty closer with power assist features. ADA regulations governing building entrances, sources for ADA information and the complete ADA product line are included in LCN's Entrance Accessibility brochure.



Booth # 718

Circle 308 on Rapid Reply

### Lifesaver's Wireless Alarm

Lifesaver Protection Systems is introducing the latest technology in wireless alarm systems by Protec. The USA made systems utilizes volumetric pressure and infrasound to detect criminal invasion. There is no installation; the customer simply plugs it in a normal AC outlet, adjusts the sensitivity switch and it is fully operational.

The Protec alarm is particularly easy to use because of its remote arm/disarm button.



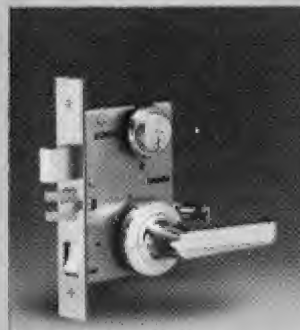
Booth # 238

Circle 309 on Rapid Reply

### Lockwood's 7100 Mortise Lock

Lockwood Architectural hardware's quality product line will be represented at ALOA '93 with their 7100 Series Stainless Steel Mortise Lock taking the spotlight position.

Lockwood's 7100 Series lock is a fine non-corrosive lock. The lock body and internal lock parts are made from high quality stainless steel and brass and it carries a 10-year warranty.



Booth # 706

Circle 310 on Rapid Reply

### TouchEntry From Locknetics

TouchEntry is a new concept in access control. It provides a ROM or a RAM chip in a sealed container smaller than a penny. The TouchEntry Key (TEK) can be placed on a key fob, an I.D. card or patient bracelet.

The TouchEntry Reader is simpler and more secure than a card reader, since there is no slot to be compromised. The cast stainless steel housing contains a solid stainless steel disc reader.



Booth # 908

Circle 311 on Rapid Reply



### Locksoft Adds To Product Line

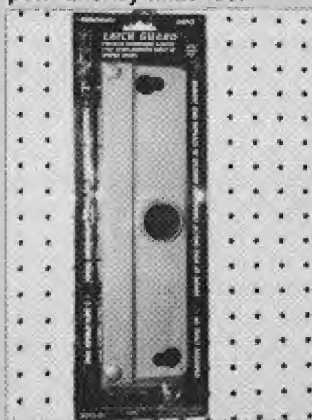
Locksoft Inc. announced two additions to their product line. A new safe library is now available for their popular Safe Opening simulator (SOS) program. The new library contains 18 different Mosler safe models and is fully compatible with your existing SOS program.

The new Key Control Documents (KCD) on disk offer the locksmith a new standardized Universal Key Control Policy in three different formats. On each format for the different types of customers you have: businesses, hospitals and universities. Supplied in ASCII format, they may be imported into your word processor to insert your own customer's name.

Circle 312 on Rapid Reply

### M.A.G. Latch Guards For Storefronts

M.A.G. Engineering introduces its new line of latch guards for narrow stile storefront applications. These latch guards accommodate single or double-acting doors, in or out-opening, flush or offset. A built-in cylinder guard as well as anti-spread pins provide for maximum security with the versatility of being either removable (without use of tools) or permanently attached.



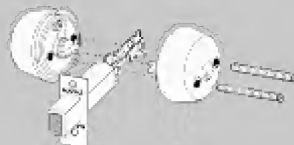
Booth # 333

Circle 313 on Rapid Reply

### Marks USA's Survivor Series

Marks USA's entry into the Grade 1 Key-In-Lever market, is a unique cylindrical lockset, made in the USA, with a host of features including a "clutch" action locking mechanism.

The 190 Survivor meets ANSI/BHMA Spec. 156.2, Series 4000 Grade 1 and is UL listed for 3 hour fire rating. The lock is supplied with a standard 6-pin cylinder with 2 nickel-silver keys.



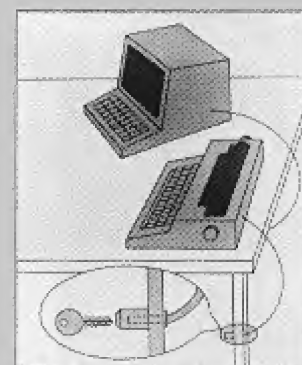
Booth # 805

Circle 314 on Rapid Reply

### Maxton Introduces Movable Locks

Maxton Lock Company Inc. introduces the Maxton Cable Lock, a security device that guards against theft of office machines and small computers, yet allows the equipment to move freely.

The new Model MIC secures equipment with a 5' vinyl-covered aircraft cable and pick-resistant, free spinning lock. Both the cable and lock attach to a desk or table leg to avoid drilling on work surfaces.



Circle 315 on Rapid Reply



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and Key Cabinets**

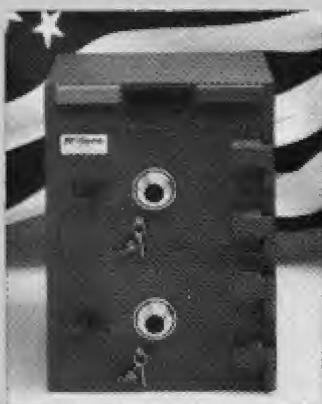
[Click here for more information](#)



### McGunn Safe's Cash Handler's

The Cash Handler Series E is 100 percent made in the U.S.A. with American-made parts and materials.

McGunn Safe Company is building high quality and cutting costs. The new Series E has the patented McGunn three-color drop drawer system with dual compartments: one to secure drops and one for easy access to working change. It also has McGunn Powerhinges® that can support a heavy door.

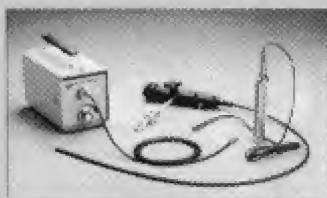


Circle 316 on Rapid Reply

### MDS's PS-2001 Fiberscope

The new PS-2001 Locksmith/Safeman fiberscope kit offers many features at a low price. It's a diagnostic tool that will save you time and make you money. Now you can attack that hi-tech safe from the back or sides with ease or reach and retrieve small items as small as a lock pin with our flexible magnetic and grasping accessories.

The PS-2001 scope is available in a standard kit and with various options.



Booth # 522

Circle 317 on Rapid Reply

### Midwest Wholesale Offers Wide Range

Midwest Wholesale Hardware stocks a wide range of manufacturer's products at the most competitive pricing available. Corbin Russwin, Schlage, Yale, Von Duprin, LCN, Norton, Dor-o-Matic, Markar, Glynn Johnson, Adams Rite, Simplex, Locknetics, Rockwood, Pemko, Detex, Ives, Bommer, Stanley and Hager are all in stock at Midwest Wholesale for quick delivery to you.

They offer competitive pricing, knowledgeable personnel with technical competence and a sincere desire to help you satisfy your customers needs. Most shipments are shipped the same day your order is placed.

Booth # 251

Circle 318 on Rapid Reply

### National Security's Smith & Wesson

Smith & Wesson has recently chosen National Security Safe Company to manufacture an exclusive line of safes. The tradition of excellence in security is now being carried on through this new line of safes. Smith & Wesson safes are 100% American made. All safes are sold through store front dealers only. These safes feature plate steel frame, 1 1/2" quad wall fireliner, plush velvet interior and mirror-like finish in a variety of colors.



Booth #1113

Circle 319 on Rapid Reply



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Providing quality  
tools, parts, and  
service for  
the security  
professional.



Continued on page 60

### S. Parker's Promotion

S. Parker Hardware is offering one free ADA/MAX Grade 2 Leverset to any locksmith purchasing five leversets at their regular price. This special deal is available from a growing list of participating S. Parker locksmith distributors.

With many features and quality that meets or exceeds ADA standards, S. Parker's exclusive ADA/MAX hardware offers exceptional value. Colors and functions can be mixed and matched.



Booth # 332

Circle 320 on Rapid Reply

### Perma-Vault's Retract-A-Vault

The retract-A-Vault is a new cash protection system from Perma-Vault. It is an affordable, easily installed "drop box" with a sliding drawer for interim storage of cash, checks and receipts near a cash register, in an office, in a vehicle or anywhere cash is stored.

Safes are equipped with choice of UL approved Medeco security lock or UL approved dual safe deposit lock.



Booth # 628

Circle 321 on Rapid Reply

### Personal Safety's Portable Door Lock

Personal Safety Corporation, a manufacturer and marketer of high quality personal safety products, has introduced the SECURE® Portable Door Lock to help prevent break-ins at home, college or while traveling. This unique, patented safety device provides security in seconds. No tools are needed for installation and it fits all standard doors that open inward.



Booth # 1109

Circle 322 on Rapid Reply

### Personal Security's Pepper-Mace

Personal Security, a division of MSI, the Mace Company, is now selling a new Pepper-Fortified Mace brand self-defense spray.

Pepper-Fortified Mace combines both CN-tear gas and OC-pepper solution, into a single police-strength aerosol. When used as directed it closes the eyes of an attacker, produces uncontrolled coughing and disorientation.



Booth # 834

Circle 323 on Rapid Reply

# Major

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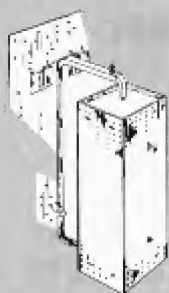


Continued from page 57

### PGS Space Saving Spinner Display

The Pegable Gondola Spinner (PGS®) is a unique 4-sided rotating display that will more than double the amount of merchandise that can be hung on a wall or gondola system. Over 9 feet of linear product capacity can be created in only 4 1/2" of space by using PGS displays.

The units are made of 1/4" hardboard pegboard panels that turn inside a chrome tubular steel frame. They are weight tested to 300 panels, shipped fully assembled and install anywhere in minutes.



Circle 324 on Rapid Reply

### Pro-Lok's Light Probe System

The Clear View System from Pro-Lok features two wedges and a special formed steel channel to make it easier to look down into car doors to see lock rods and linkages. Combining these three pieces with the Pro-Lok Super Light Probe car opening light give you an excellent viewing system.

The Clear View system (AO-63) is designed to hold the rubber glass-seals out of the way. The result is a 3/8" x 4" clear area that gives you room to look into the door. The Super Light Probe lighting system (AL3000 + AL3007) is a very bright car opening light.



Booth # 235

Circle 325 on Rapid Reply

### R & D Picks Sidebar Locks

The locksmith's professional choice for picking and decoding GM & Ford sidebar locks is R & D Tools. The sidebar locks have always been considered as one of the most pick resistant locks. In addition decoding this lock has been a time consuming process. The R & K Tool Company has lead to the availability of precision tools that will simplify the picking and decoding. You will be able to fit the first key to GM ignition locks without air bag removal.



Booth # 928

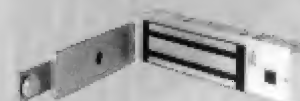
Circle 326 on Rapid Reply

### Delayed Egress Lock From Rofu

The Model 8011-003 Delayed Egress Magnetic Locking Device has been introduced by Rofu International.

The unit is self-contained with all electronics built into the magnet's housing. Installation of the lock is similar to Rofu's other locks and no changes are required to existing door hardware. The lock is UL listed, conforms to the NFRA 101 Life Safety Code and is in "patent pending" status.

All functions are micro-processor controlled. Custom programming for special applications is available.

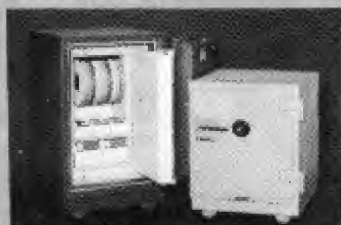


Booth # 410

Circle 327 on Rapid Reply

### Schwab Corp.'s Media Safes

Schwab's two new media safes provide U.L. classified 125 degree protection for computer media forms. The 1820CTS holds up to 600 3-1/2" diskettes or 12 10-1/2" tapes. These safes are also covered by Schwab's unique \$100,000 Covered Contents warranty and our free after-the-fire replacement program.



Booth # 505

Circle 328 on Rapid Reply

### Secura Key's Touch Card System

Secura Key is pleased to announce the introduction of the newest and most sophisticated of its very popular line of stand alone Touch Card access control units, the Entracomp 28SA. This unit has the most features at a very competitive price.

The Entracomp 28SA is a self-contained, single passageway, card access control unit that allows up to 65,000 individual users. Up to 15 card time zones and one door unlock time zone are available.



Booth # 904

Circle 329 on Rapid Reply

### Securitron's New DK-25 Keypad

After three years of extensive research development, Securitron introduces its new "weatherproof/bullet proof" keypad called the DK-25.

The narrow style keypad is suitable for outdoor as well as indoor use with all switch electronics completely hermetically sealed and potted in a cast stainless steel housing.



Booth # 1131

Circle 330 on Rapid Reply

### Security Control's Key-Z: Software

Key-Z is an easy-to-use key control software package that takes the guesswork out of key inventory management at a very affordable price. Key-Z answers all questions from "who has which key?" to "which key opens which door?" to "what's been lost or stolen?" Key-Z gives all the details needed including holders of keys, key whereabouts, transaction receipts and summary.



Booth # 435

Circle 331 on Rapid Reply

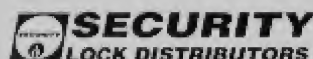


Continued from page 60

### New Catalog From SLD

Security Lock Distributors' new catalog reflects its commitment to providing customers with comprehensive product information on its inventory of mechanical and electronic locking devices and accessories.

Detailed product data greatly simplifies buying decisions. Parts identification and specific dimensional, finish and function information are included.



Booth # 739

Circle 332 on Rapid Reply

### Sentex's Residential Entry System

Sentex Systems is pleased to announce the introduction of the Jewel system, a small elegant "No Phone Bill" entry system for single family residences. These systems tie directly into the house's existing telephone line to eliminate the need for a telephone line to eliminate the need for a dedicated to visitor entry. Thus, the owner never receives a telephone bill. And the Jewel uses a special form of Call Waiting (as well as Distinctive Ringing) to tell the residents when there is a call coming from a visitor, even when the resident is on an outside call.

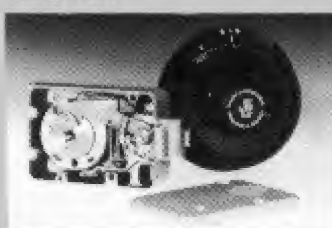


Booth # 341

Circle 333 on Rapid Reply

### S&G's Scrambler™ Combination Lock

In fast food restaurants, convenience stores and other retail establishments, leaving the safe combination dialed in for easy access during busy periods is known as day locking. This is a common practice that can contribute to lost profits due to the mysterious disappearance of cash. The new Scrambler™ combination safe lock from Sargent & Greenleaf is specially designed to prevent day locking because it automatically repositions or scrambles the lock's wheel the instant the lock's bolt is retracted.



Booth # 405

Circle 334 on Rapid Reply

### Silca Runs Show Special

The Silca Club and Club Jr. are popular high security key machines, known around the world. Both machines easily duplicate all of the laser/sidewinder automotive high security keys without adapters. Many additional adapters are offered to do a variety of other jobs as well.

For the ALOA show Silca is offering their best price ever on these two key machines.



Booth # 115

Circle 335 on Rapid Reply

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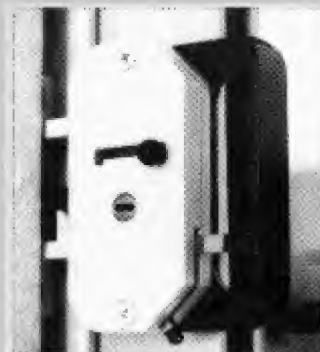


Continued from page 62

### Slideline's New Auxiliary Lock

Slideline, Inc.'s Latchmatic lock is now available. The self-latching auxiliary door lock is designed to be mounted on existing sliding doors, in addition to regular locks. It automatically latches the door secure when it is closed.

The Latchmatic Lock features a built-in deadbolt, a handle, an exterior thumb piece to open the door from outside, an optional exterior key cylinder, and a "hold open" option to take it out of the latch mode.



Booth # 541

Circle 336 on Rapid Reply

### Supra's Stor-A-Key Prevents Lockouts

Customers rely on their security professional, the locksmith, to offer advice that can help with future key control problems and Stor-A-Key from Supra delivers.

Stor-A-Key means peace of mind for parents and their school age kids. It is easy for children to use, and a convenient place to store extra house keys. The easy to change, three-letter combination is simple to remember and convenient for the entire family to use.

Mobile locksmiths get extra profit from lockout calls when they offer Stor-A-Key as a preventative measure against future lockouts.



Booth # 902

Circle 337 on Rapid Reply

### Tanner Offers Security Bit-Kit

Tanner Bolt & Nut Corp. offers the Security "Bit-Kit", a new tool kit which contains the most popular security screw tools including: Torx, Socket, Spanner, Tri-Wing and Phillips Security bits. Tanner offers a complete line of security fasteners and masonry anchoring devices.

Other lines carried in stock include self-drilling screws, Lenox saw blades, Champion cutting tools.



Circle 338 on Rapid Reply

### TACO Lever Handle Conversion Kit

Trans-Atlantic Co. (TACO) offers a new product, which they designed and patented: a lever rose or escutcheon conversion kit that converts any brand's standard heavy-duty lockset from knob to lever operation without removing the lock unit from the door.

The kit enables lock conversion in the field. The conversion assembly eliminates all constructional and operational problems existing with lever handle cylindrical locksets. The kit is an integrated assembly with positive stops in lever and rose assemblies, preventing over-torquing the lock when the latchbolt is fully retracted.

Booth # 711

Circle 339 on Rapid Reply

## NATIONAL AUTO LOCK SERVICE, INC.

**National Auto Lock Service, Inc. offers a wide range of equipment and services for the Automotive Locksmith. From tools and hard to find key blanks to transponder programming, we can take the mystery out of car service. We accept credit card orders, and can ship COD. Contact us for the latest in automotive technology.**

[www.laserkey.com](http://www.laserkey.com)



### Trine's Fire Rated Strike Line

Trine Products Corp. has introduced a new series of fire-rated electric strikes. The EN-400, 900, 950 meet UL standard 10B, 3-hour rating for class A doors as well as BHMA grade one specifications. They feature all stainless steel construction, 2,000 lbs. of holding force and field adjustability of left or right handling.

The strikes are designed for both wood and metal jams and can be used in either new or replacement installations.



Booth # 1026  
Circle 340 on Rapid Reply

### Utilimaster Offers Aeromate Van

The Aeromate walk-in van features exceptional maneuverability, extra headroom, one-ton payload and V-6 power. The front wheel drive four speed automatic transaxle offers a fuel efficiency rating of 17 MPG and gives Aeromate utility value and operator comfort. It also features a long life aluminum body.



Booth # 1033  
Circle 341 on Rapid Reply

### West Coast Chains Photo Badge Holder

A new compact, lightweight, dual purpose photo ID badge holder has been announced by West Coast Chain Mfg. Co.

The Mini-Bak ID is clipped or pinned to the wearer's clothing. It holds the photo identification badge in plain view. Inside the holder is a tiny, precision, spring-loaded reel attached to a 24 in. long nylon cord. The wearer can effortlessly pull the badge out to arm's length and pass it through a card reader without detaching it from clothing.



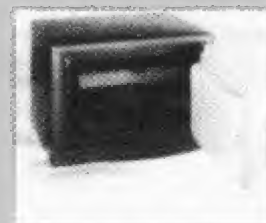
Booth # 630  
Circle 342 on Rapid Reply

### Wilson's Imported Fire Safes

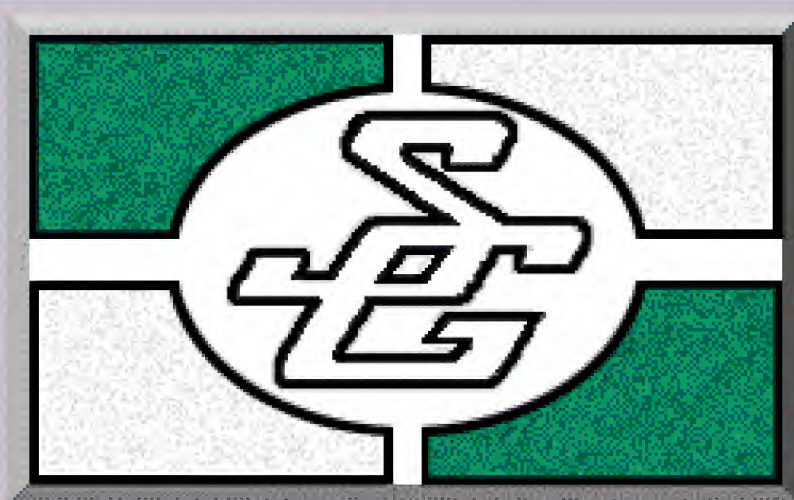
Wilson Safe serves as a distributor for their own imported top quality fire safes. The Diplomat line offers one and two hour rated units, each with combination and keylocks, adjustable shelving and inner drawers.

Furthermore, the reliance line offers two sizes of undercounter units, B/C rated burglary chests, and rotary hopper depositories.

In addition, a new line of TL-15 and TL-30 composite two hour fire rated units are available.



Booth # 1046  
Circle 343 on Rapid Reply



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electronic safe locks for...security...  
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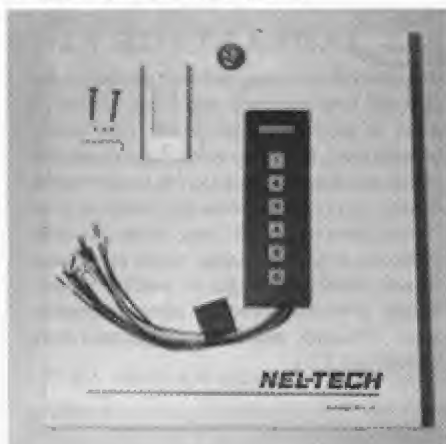
## Hands On Installation

by Tom Seroogy

# Nel-Tech Keypad System

*"The Nel-Tech system has a keypad separate from the control panel. This means no access components are on the keypad."*

Following our line of access control articles, here is a sample installation of the Nel-Tech LKAC-1 control board and the 6SP Stormpad keypad (see photograph 1).



1. The Nel-Tech Stormpad and LKAC-1 access control system.

As with all projects, it is most important to evaluate the conditions of the installation site and order the proper hardware.

### Site and Equipment Evaluation

At this particular site the install is going onto an interior wood door and frame with steel stud walls. The door has a Schlage F series entrance knob. The owner decided to keep this function, knowing that the door could still be left unlocked.

Because the door stop edge can be separated from the frame, and the door knob latch attacked with a credit card, knife or other thin object, a latch guard was recommended but not installed.

Referring back to earlier access control articles on the different types of access system design, the Nel-Tech system incorporates a keypad separate from the control panel. Doing this means that none of the components (i.e. the strike wiring and relay, power source wiring and relay, etc.) allowing access are directly on

the keypad. This eliminates the possibility of anyone trying to compromise or bypass the system by removing the keypad from the wall and bypassing the control panel. In fact, the only thing anyone gets trying to violate the system through the keypad is a handful of wires.

The LKAC-1 allows for one programmed user code, four digits in length. The entry time is adjustable from one to eight seconds or latching and includes a tamper lockout feature as standard. Programming for the system is done very simply at the control panel.

The user code is programmed by setting one switch on each of the four dip switches to the "ON" position. No more than one number can be in the "ON" position for each dip switch.

The entry time is adjusted by turning the small potentiometer wheel located on the LKAC-1 control board. To achieve a latching operation, cut the jumper wire at the top right corner.

The tamper lockout feature is always present and not programmable. During operation of the keypad, entering the wrong code automatically locks the unit up. Subsequent number entries will not work, including the correct code. To clear the unit for entering the correct number, simultaneously press any buttons that together equal seven. For example: the 3 and 4 buttons, or the 2 and 5 buttons. Note should be taken that these buttons must be depressed and released simultaneously.

Power requirements for the control board and keypad is 12 - 16 VAC (volts AC), using a 40 VA (volt-amp) class II transformer.

A nice feature of this unit is the battery back up capability. Long leads are provided on the control board that are attached to a gel cell or lead acid battery. Should power fail, the battery

will keep the unit operating.

The control panel can also be used to power a 12 VDC or AC lock. Locks requiring up to 24 volts can also be used if a separate power source is used.

To make this installation as easy as possible, an Adams Rite 12 VDC fail secure electric strike for wood frames is used (see photograph 2).



2. The Adams Rite electric strike and transformer.

For many locksmiths, the 14 wires coming from the back of the Stormpad seem intimidating. Careful review of the instructions, however, reveal that with the back of the keypad facing you, the wire leads on the left control the keypad status LED's (the red and green), and the keypad input buttons (the numbers 1 to 6). Wire leads to the right are used to light each of individual buttons. This feature is especially nice for evening or low light applications.

Because our application does not require that the buttons be illuminated, only the wires on the left need to be used. The ORANGE lead on the left side is for a yellow status LED that we also are not going to use. Therefore, the only leads we need to connect are six from the left side of the keypad. The wire we'll use to connect the keypad to the control board is 22 AWG/8

Continued on page 72



Continued from page 70

conductor/stranded cable. Because eight conductors (eight separate wires) are available, two are extra and not used.

The strike and transformer use a twisted pair of 22 AWG/stranded wiring.

### Running the Wire and Mounting Equipment

Before installing an access control system, especially one that you are not familiar with, it is sometimes a good idea to do a trial hook-up at your service bench and try the equipment out before doing the actual installation. Doing so can prevent time consuming errors attempting to learn about the system in the field.

For instance, the LKAC-1 control board can be used for a variety of applications including alarm shunting, switch control and access control. Therefore, we can expect that not all the terminals are going to be used for our particular application.

In our system we are installing a DC powered strike, for instance, receiving power from the control board. The wiring diagram for this style installation varies slightly from an AC powered strike receiving power directly from the transformer or an outside power source. And it varies quite dramatically from an alarm application.

After making a successful mock-up, it's time to do the actual installation.

First, the mounting location for each piece of the system must be determined. While the strike location is obvious, some thought should be taken as to where to put the keypad and the control panel. The control panel should be placed in a closet inside the protected area near a 110VAC outlet (standard wall plug). At the same time, consideration needs to be made as to where and how the wiring is going to be run.

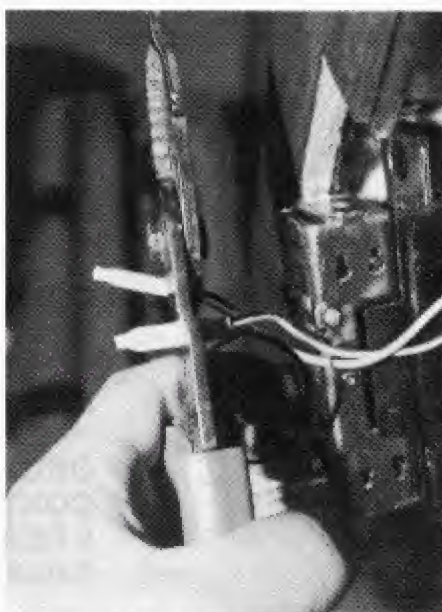
With locations chosen, we can run and drop the wire in the appropriate wall locations and then prepare to install and mount the hardware.

The strike is first to be installed. Outside of any extensive wire runs, this is usually the most time consuming of all the tasks. This wood frame is mortised out and the wiring pulled through (see photograph 3).

Using crimp connectors the wire leads of the strike are attached to the wire and then carefully placed into the



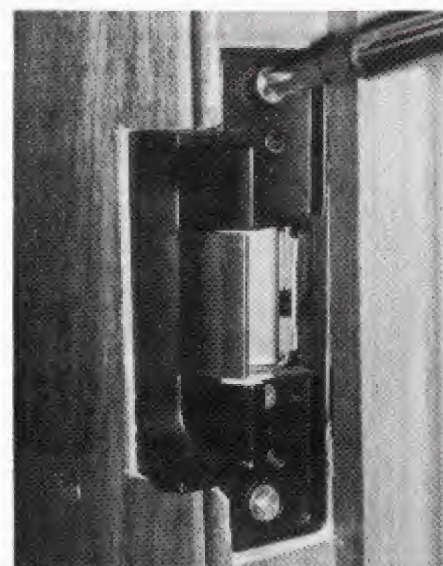
3. The mortised electric strike area with the wires already run.



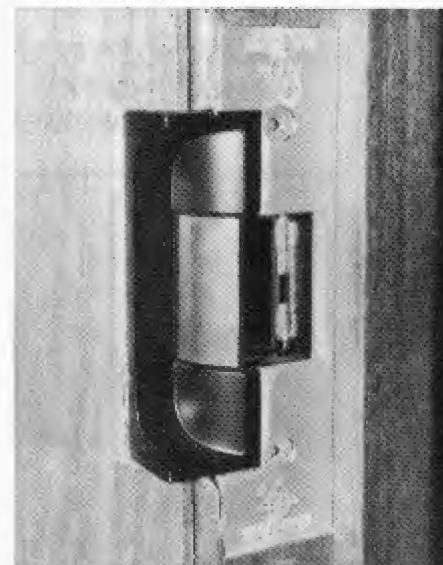
4. Terminating the strike.

door (see photograph 4). Extreme care must be taken not to pinch or snag the wiring on the frame, studs or strike as it's being installed (see photographs 5 and 6).

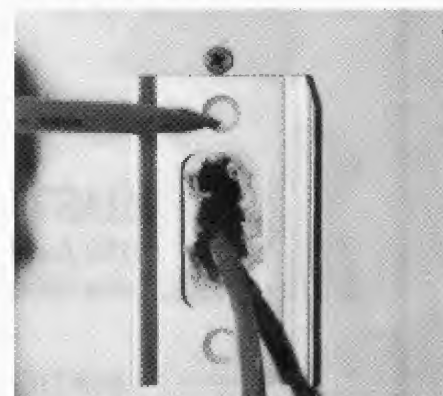
Next, we install the Stormpad. At the desired location we drill an access hole and pull the keypad cable through the opening. Then place the keypad mounting bracket into position and mark for mounting screw locations (see photograph 7). Because this unit is attached to drywall, we first drill and insert wall anchors (see photograph 8). Make sure that the anchors are flush with the wall. If they are not, the mounting bracket will not hold the keypad snugly against the wall. This is not only visually



5. During strike installation be careful not to pinch the wire leads.



6. The installed strike.



7. Marking the mounting bracket screw placement.

displeasing, but allows the keypad to rock back and forth. With the anchors in place, the mounting bracket is fastened to the wall (see photograph 9). Make sure that the keypad cable is fed through the center of the bracket before attaching.

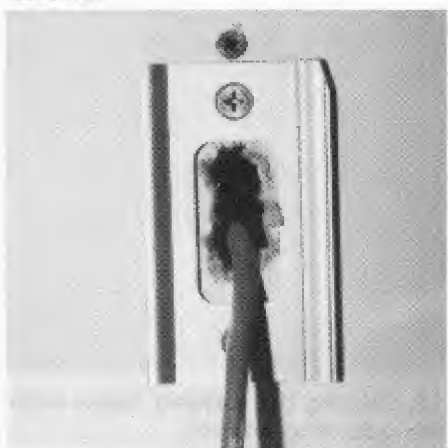
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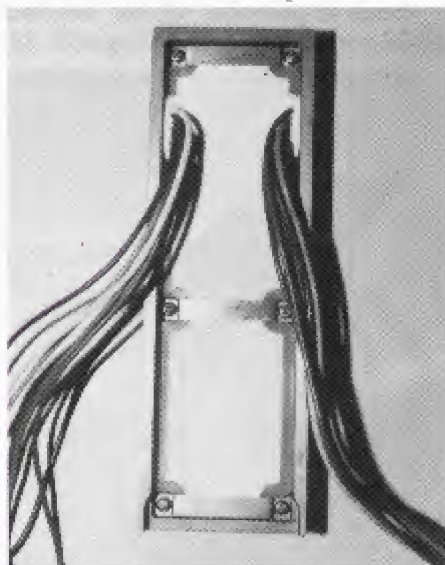


8. Drilling for the mounting bracket screws.



9. Keypad mounting bracket in place.

Knowing we are not going to use the illuminated button option of the Stormpad, it is not necessary to use all of the keypad leads. Turning the keypad over, we see two groups of seven wire leads. The wires to the right are for the illumination option and are not used. All except the ORANGE lead on the left side of the pad are used,

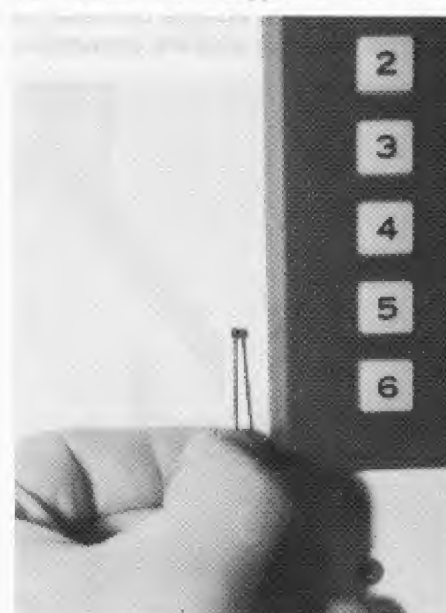


10. Don't let the 14 leads coming off the back of this Stormpad scare you. The instructions are very clear as to how they are connected.

however (see photograph 10).

Before attaching the keypad to the cable, partially screw the two #2-56 set screws into both sides of the keypad. These will later be tightened to retain the keypad on the mounting bracket (see photograph 11).

Cutting and stripping the cable leads, attach the keypad to the cable



11. Place the small set screws into both sides of the keypad.



**SCHWAB CORP.**

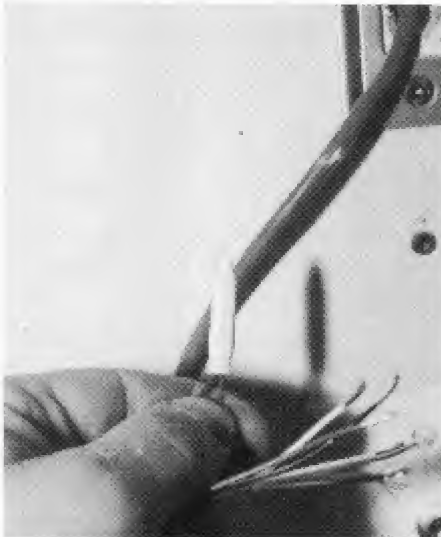
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using the appropriate connectors (see photograph 12). Do not cut the keypad leads. The extra length of these wires are needed to allow the keypad to slip comfortably over the keypad mounting bracket. In this particular case, each color of the keypad leads matched a color of the cable leads. In cases where lead colors are duplicated it is critical that both ends of the cable be tagged with the correct connection

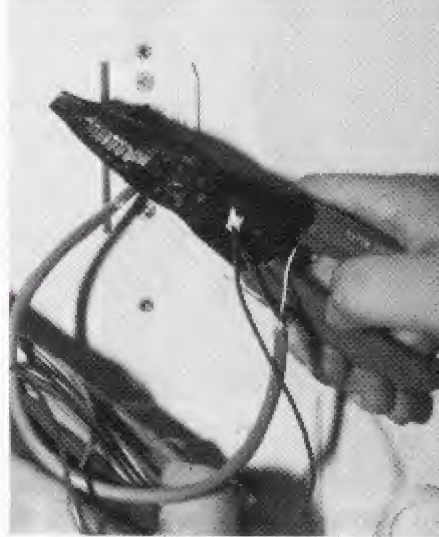


12. Connecting the keypad to the cable.

(see photograph 13).

Once all keypad connections have been made, carefully spread out and flatten the wires along the back of the keypad. Then gently pull the keypad straight down over the mounting bracket, feeding the wires into the wall as it slides into position (see photograph 14).

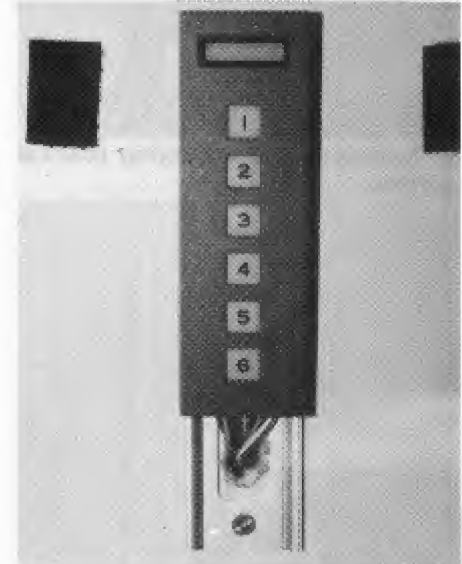
Once in position, tighten the two #2-56 set screws (see photograph 15



13. Crimping the connectors.

and 16). This is necessary to prevent unauthorized keypad removal (see photograph 17). When done, tape the allen wrench to the inside of the control panel. This is not a standard size and may be impossible to obtain short term.

With the strike and keypad mounted, we now mount the control



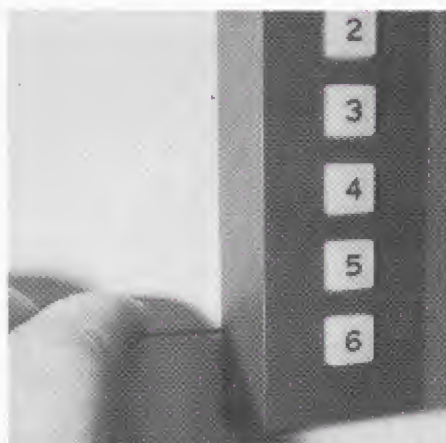
14. Sliding the keypad down onto the mounting bracket.

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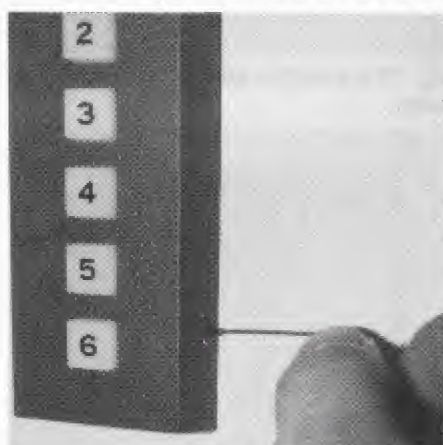
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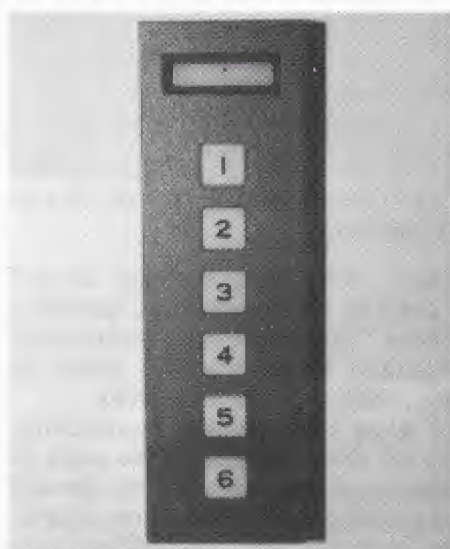




15. Tightening a set screw into one side...



16. ...and then the other.



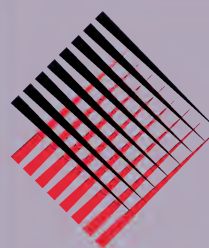
17. the keypad mounted.

board. Running the wires through one of the knock outs on the box, mark for the mounting screw holes. Again, because the piece is mounted to drywall, anchors are first installed (see photograph 18).

#### **Terminating and Programming**

With the hardware mounted, it's time to connect or terminate the cable connections and then program the unit.

As a general rule, do all power



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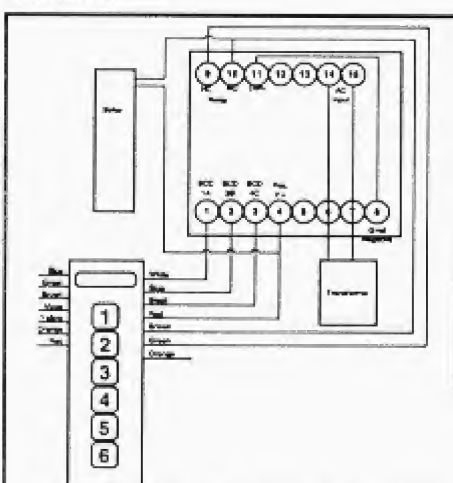


**18. Marking for the panel mounting screws.**

connections last. This prevents any possibility of shorting the wire ends or causing damage to electrical components while terminating the different leads.

We started by making all keypad connections first.

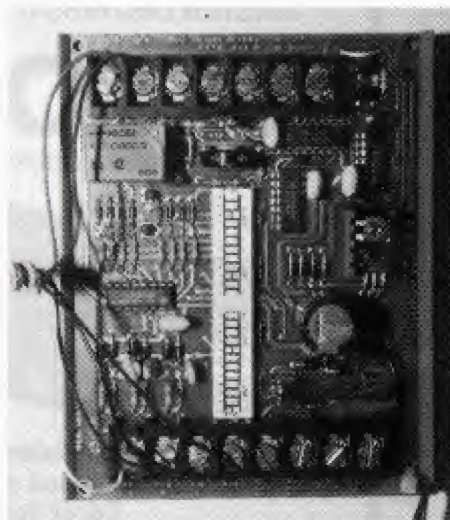
Following the wiring diagram (see illustration 19) for a DC powered electric strike the WHITE, BLUE, BLACK, and RED keypad leads were attached to their designated terminals.



**Illustration 19. This is a basic diagram of the wiring scheme for the SP6 Stormpad and LKAC-1 control board.**

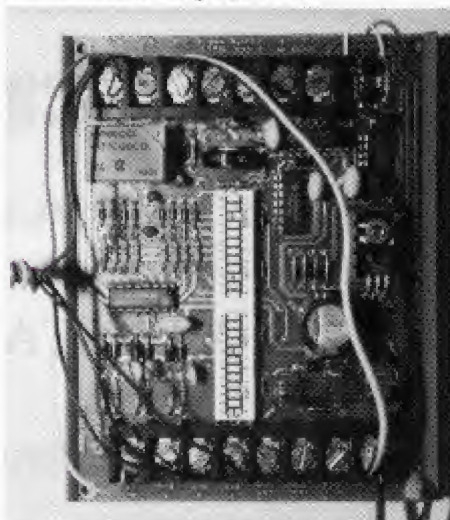
The BROWN and GREEN leads that control the Green and Red door status LED's are attached to the relay terminals at 9 and 10. Because we are using a fail secure strike, we want the Green LED (the BROWN lead) to be on when the strike is powered and the Red LED (the GREEN lead) to be on when the strike is not powered. Therefore we attach the GREEN lead to the Normally Closed (N/C) relay terminal #9. Here it receives power, lighting the Red LED, only when the strike is not powered. The BROWN lead is attached to the Normally Open (N/O) relay terminal #10. Here it receives power, lighting the Green LED, only when the strike is powered.

Should a fail safe strike be used, simply reverse the connections (see photograph 20).



**20. The keypad leads are terminated.**

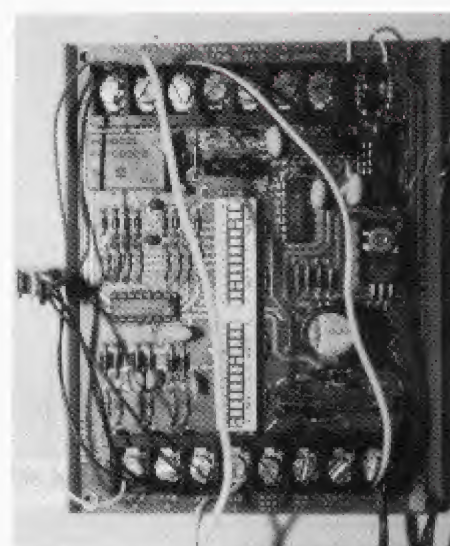
With the keypad connection complete, we place a jumper wire from the ground terminal #8 up to the relay Common terminal #11. This connection supplies the Negative (-) or ground side of the strike with power (see photograph 21).



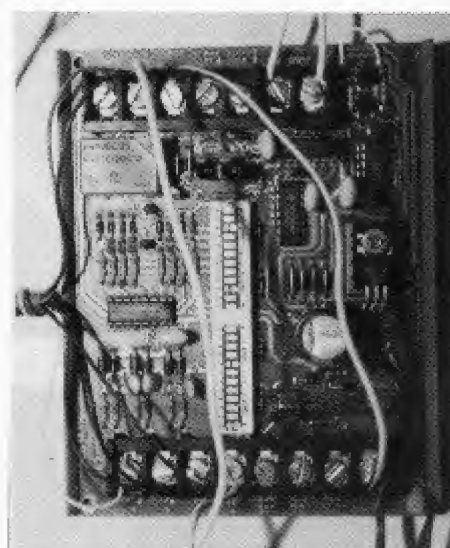
**21. Bringing the ground or negative up to the common side of the relay.**

Next, attach the strike. One end is connected to terminal #4, the Positive (+) side of the strike connection. The other end of the strike is attached to the #10 or NO relay terminal. Here the relay acts as an On/Off switch for the electric strike and the Green LED (see photograph 22).

The final connection is the transformer (see photograph 23). These leads are connected to terminals 14 and 15. Before connecting these leads to the control



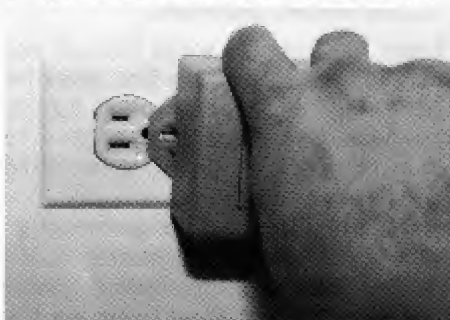
**22. The electric strike connection is next.**



**23. The final connection is the transformer.**

panel, make sure that they are not "live," or are powered up. Attaching them "live" can cause irreparable damage to the control panel or transformer (or power source).

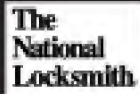
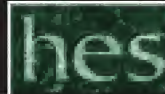
After making this connection, attach the other end of the cable to the transformer and plug into the wall (see photograph 24). It is now time to program the unit. The Nel-Tech only



**24. Now, plug the unit in and set the user code and entrance delay time.**

*Continued on page 80*

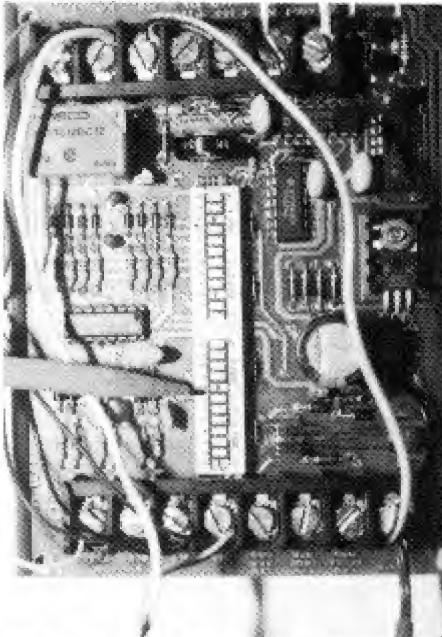




*Continued from page 78*

requires two settings to be made (the four digit user code and the entry time), and both are made at the control board (see *photograph 25*).

To set the user code refer to the four dip switch groups found on the



**25.** The user code is a four digit number set by moving these dip switches.

control board. Each of these switches represent one digit of the user code. On each dip switch group there are six tiny levers or switches. These levers are numbered 1 to 6 and represent the button number for that digit in the user code.

In order to set a code, the number for each digit of the user code must be in the "ON" or "UP" position on the dip switches. Only one lever or number for each digit can be on, however. If more than one number is chosen for a digit, the pad will not operate properly.

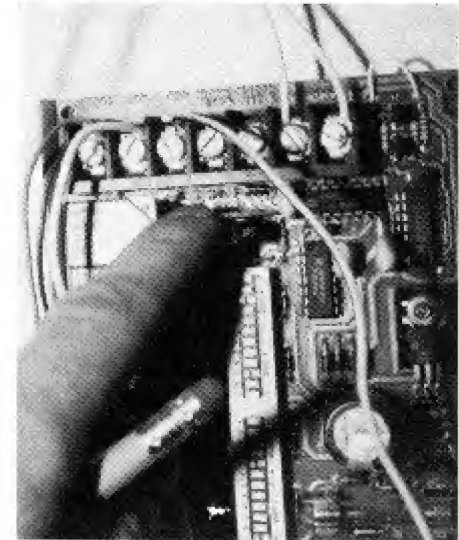
For example, if we want a user code of 6152, the number 6 lever of the Digit 1 dip switch will be on, the number 1 lever of the Digit 2 dip switch, the number 5 of the Digit 3 dip switch, and the number 2 lever of the Digit 4 dip switch. This ends the user code programming.

To set the entry time (the amount of time the lock will be powered), turn the potentiometer wheel found at the top of the control board (see *photograph 26*). Timing can be adjusted from 1 to 8 seconds. Turning the wheel to the left increases time, turning it to the right decreases time.

If a latching function is desired, cut the wire loop found at the top right corner of the control board (see *photograph 27*).

#### **Operating the System**

To operate the system simply enter the user code into the keypad. If a wrong code is entered, the system will lock up and not operate even if the



**26.** Turning the wheel of this potentiometer controls the entrance delay time.

*Continued on page 82*

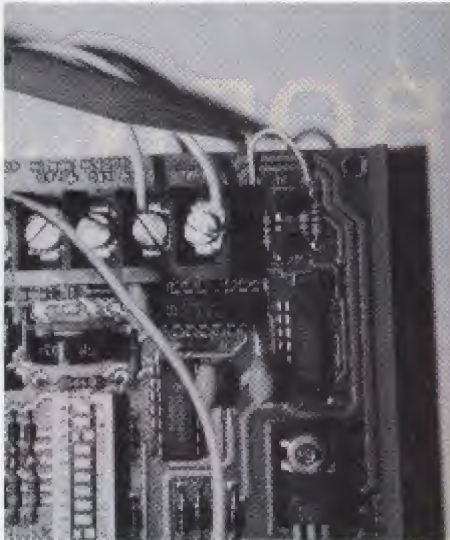


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Continued from page 80



27. If a latch operation is desired, simply cut this wire loop.

correct code is used. This is a protective feature to prevent unauthorized personnel from finding the code through the process of elimination.

If you find that the system does not operate after entering the correct code simply press and release the tamper reset code (any two buttons that equal seven) simultaneously. The

two easiest buttons on the Stormpad are probably the 3 and 4 buttons.

As a practice, and to save the end user future aggravation, instruct the user to press the buttons 3 and 4 as a prerequisite to entering the code. This way it is always cleared before entering the code whether it is



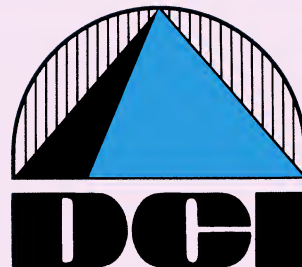
28. Before entering the code, press the 4 and 3 button simultaneously to clear and reset the unit.

needed or not (see photograph 28 and 29).

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29. Then enter the user code.



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by Jake Jakubowski

## Aspirin And Old Locks

*"Occasionally you are going to come up against a customer that will cause you to exceed the 'recommended daily dosage.'"*

My dictionary describes aspirin as, "A white crystalline compound, the acetyl derivative of salicylic acid, used for the relief of pain, etc." What my dictionary fails to say is that them little white suckers do work: and every once in awhile, you are going to come up against a customer (In this case, two sisters.) that will cause you enough stress to make you exceed the "recommended daily dosage" in a heart-beat. So, if you don't already, keep a container of them on your truck.

As luck, or a lack thereof, would have it, I answered a call one morning, and a very pleasant-sounding lady, with refined North Carolina accent, wanted to know "If it would be pahssahble for ya'll to come ovah to our (rhymed with hour) house and take a look at the locks on our (Now, you've got the hang of it.) doors (More like "doahs")."

I told her that it would be possible, and that although I did not know what it was that she needed, there would be a minimum fee (our service call), plus any actual work I might do. She "reckoned that would be fayahr". And we agreed on a time.

When I arrived at the appointed time, Mrs. Beaumont (Name changed to protect me from a lawsuit), introduced me to her sister, Mrs.

Bawcum (her name was changed too). Mrs. Bawcum immediately informed me that she was "ninety-two, and I've nevah been outside this county, except once when we went to a revival in Henderson, (Twelve miles away, in the "next" county.) in 1926!". Mrs. Beaumont chipped in her bit of history by telling me that "Our (rhymes with hour.) daddy built this house in 1886, and we were both born right here!"

I told the ladies that I thought that was very interesting, and would they mind showing me the locks they wanted me to "look at."

"Yes, indeed!" said Mrs. Beaumont, "Our daddy even put the locks in, when he built this house in 1886!"

"And I was born right there, in that room, in 1899," said Mrs. Bawcum. "Of course, that's not the same bed that I was born in. Momma and Daddy bought the 'new' bed in 1926. You know that was the same year that I left the county for the first, and only, time? That's when I went to a revival in Henderson!"

"No, dear," says Mrs. Beaumont, "they bought the new bed in 1928. You always did get that date mixed up."

After another ten minutes of that sort of discussion, and another couple of minutes trying to persuade the

sisters that I could not drink tea, and I appreciated their offer of "some ham biscuits," but I had just eaten. I asked Mrs. Beaumont, again, if she could, *please* tell me what kind of problems she was having with her locks!

"Oh! Yes, sir!", she said. "My daddy put those locks on the doahs when he built this house in 1886! They always worked fine, until just the last few years. Daddy nevah did lock the doahs, you know, he always said, 'Locks are for honest people.'"

My day was becoming less than serene, and I was wondering if I could get out to the truck long enough to drop a couple of aspirin. "But, nowadays," she continued, "a body can't be too cautious, you know!"

"We cannot lock any of these doahs now, sir.", she continued. "The keys just won't work any longah!"

I asked her how long it had been since she had been able to lock the "doahs."

"Well, Daddy (If she said, "built this house", to me one more time, I was leaving!), nevah did believe in locking the doahs, you know." (Yes, ma'am, "Locks were for honest people" thought I). "But the way things are nowadays, you can't leave your doahs unlocked!"

"Yes, ma'am," says I, "But how long has it been since you have locked



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these "doahs?"

"Let me see, we painted the inside of the house the last time in '87, uh, 1987, that is. So I guess it's been nearly that long, anyway."

I thought: "Five years, and they're just getting around to calling a locksmith?"

"No, Velma, honey," said Mrs. Bawcum, "It was in 1986, because I remember that we painted the inside of the house in June, and I told you that it been nearly sixty years to the day since I had gone to Henderson, to attend that revival in 1926."

"Why, you'ahr right as rain!", her sister said. "'Cause I remember us talking that if we had waited another month to paint, it would have been the 100th anniversary of Daddy building this house (Everybody: 'In 1886!')".

I was beginning to feel that I had somehow stumbled into a remake of the Twilight Zone or, at the very least, someone was filming this for Totally Hidden Video or some such. I didn't know whether to expect a Teddy Roosevelt-type to come rushing out of the basement yelling, "CHARGE!", or not, but I was definitely getting ready to vacate the premises! Man, I needed some relief!

Anyway, Mrs. Beaumont, told me they would leave me alone (Maybe there really are guardian angels), to examine the locks, to see if I might be able to fix them. Mrs. Bawcum destroyed my guardian angel theory, by telling me that her daddy put the locks in when he built the house in 1886! My head hurt.

Finally, alone with my headache, I was able to examine the "doahs" in the part of the house that I was in. They had been painted over so many times, that I don't think they could have been used, even after soaking in paint and varnish remover for a month. From what I could tell the locks were not only generously covered with paint, but the ones that weren't, appeared to be seized up, and the spindles on several were completely shot!

With a certain amount of trepidation, I went back to the living room where the sisters were. I told them that I thought they should have new locks put on all the doors, or at least on the front and back door, so they could lock up at night. Before I could say anything more (not so unusual under the circumstances), Mrs. Beaumont said: "Lordy, Mr.

Jake, (she had difficulty with Jakubowski) set a spell!" I know she was being kind but, I didn't want to sit. I wanted out!

I explained to the sisters that putting in new locks would involve taking out the old mortise type that were on the "doahs" now, installing Mag plates, and cylindrical locksets. I further told them I recommended deadbolts on both the back, and front doors. And then I quoted them a price for all six doors, including service call, and installation.

Mrs. Beaumont looked at Mrs. Bawcum. Mrs. Bawcum looked at

Mrs. Beaumont They both looked at me. Mrs. Beaumont asked: "Will the new locks ya'll put on be just like the ones Daddy put on when he built this house in 1886?" (She got me again!). I told her that they wouldn't be the same, they'd be better. She then wanted to know if they would "look the same." I told her that they really did not make the original bit key locks, like her daddy had used, anymore. I explained that the newer replacements for that kind of lock just were not the same quality.

She wanted to know if I could show her a lock that was similar to the



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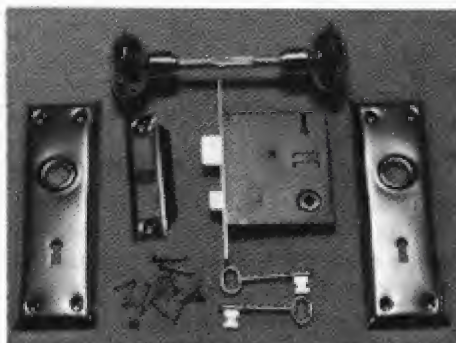


"ones daddy put on this house?" So I went out to the truck and brought one in to show her. (Ultra Hardware Products #3460 - Code 44609 "Old Time Mortise Lock With Skeleton Key," cost: \$7.70 ea. at time of writing. See photograph 1.) She was ecstatic!

"Why that's just like the locks that we have now! Look, Vera, honey. Mr. Jake has locks that are just like the ones Daddy put on the house when he built it (Everyone:) in 1886!"

Since neither one would listen to my explanation of the difference in quality, I decided to go along with them. They even refused my recommendation of deadbolts, "cause that would be different than what Daddy would want," so, I quoted them a price for the locks, installation, and service call; paying particular attention to the installation part of my estimate, since this type of retro-fit can be less than easy. They agreed, and I told them it would take a couple of days for me to get the six locks to install.

At any rate, the big day came, and I made sure that I had plenty of aspirin on hand. Photograph two, shows me "scoring" the paint around the escutcheon of one of the locks. This is

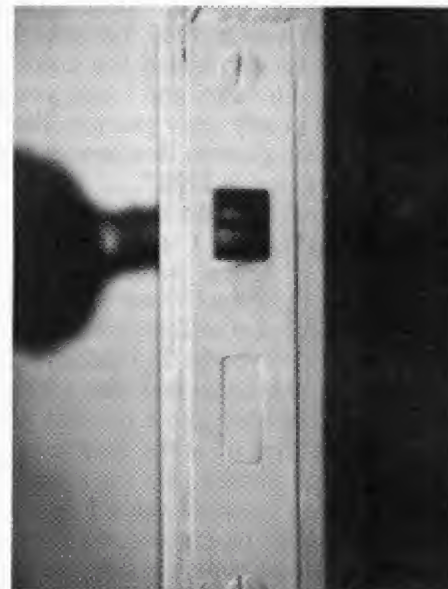


1. Ultra's "old time mortise lock with skeleton key."

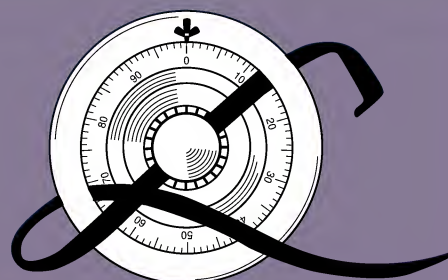
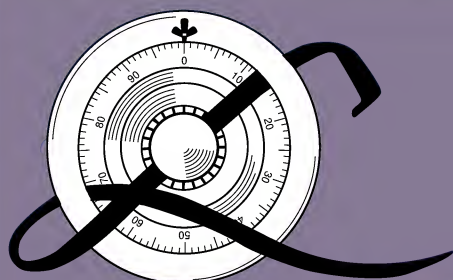


2. Scoring the paint to prevent chipping when escutcheon is removed.

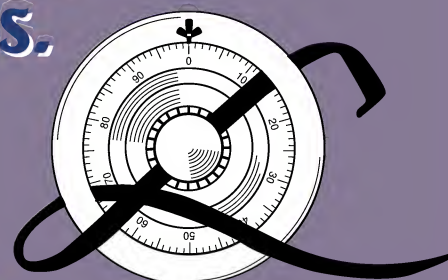
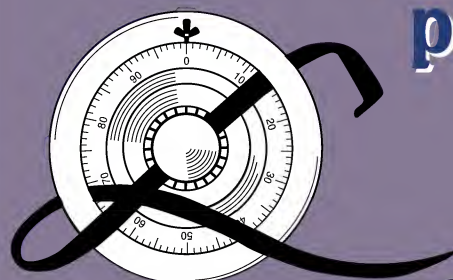
necessary on heavily painted doors, to insure that you don't peel the paint off half of the door when you remove the old escutcheon. You need to do the same thing around the face of the lock case also. (See photograph three showing the tremendous paint buildup.)



3. This illustrates the amount of paint buildup the can be found on many old locks.



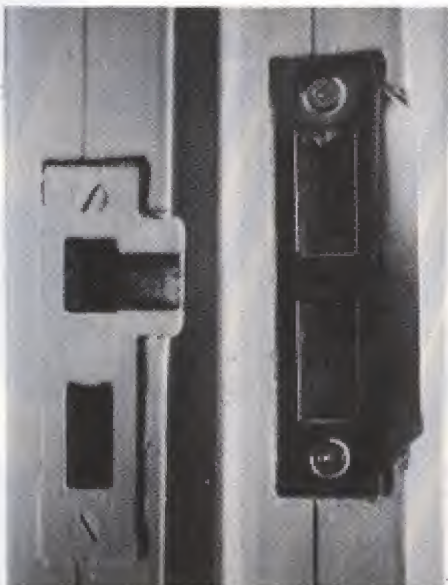
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Photograph four, shows the old strike plate, and the new strike plate, which is slightly longer than the original. The small areas where the paint chipped while chiseling the frame out for the new strike were easily covered with some wood putty, and white paint. In spite of the "scoring" that I did first, photograph five shows more chipping of the paint,



4. The old strike is on the left, and the new on the right. Notice where the paint chipped despite my efforts to chisel out the mortise.

around the lock face plate. This type of "damage" is extremely difficult to avoid, but can be easily repaired. Imagine what would happen to the painted door if I had not "scored" the paint first!

Another problem that can be encountered with retrofitting these old locks is shown in photograph six. The escutcheon of the replacement lock is not quite as long the old one was. Again, a little bit of sand paper,



5. Chipping paint is difficult to avoid, but can be carefully repaired.



6. At the bottom of this photo you can see "raw" wood. You need to be prepared to fix this type of problem.

*Continued on page 91*

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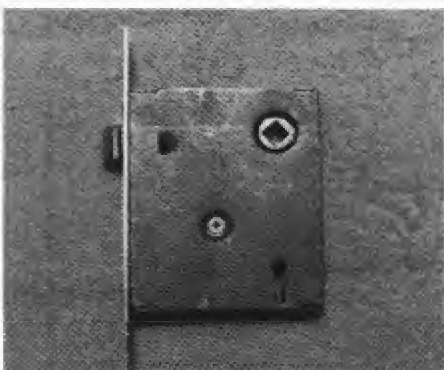
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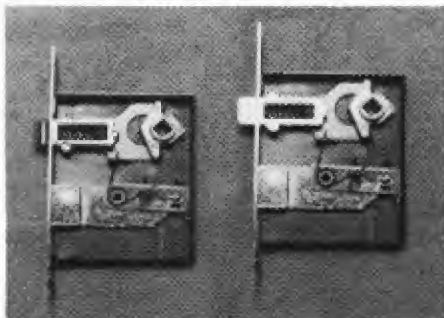
wood putty, and paint can make an effective repair. As you can also see in photograph six, the replacement is not a bad looking unit. Of course, I would not recommend them for exterior doors, or as the only lock on those doors. However, these two ladies wanted to keep the house as near to "what Daddy built," etc., ad infinitum.

This particular lock from Ultra comes handed, but it is very easy to change. Photograph seven shows the



7. The screw in the center of the lock case is the only one you have to remove to change the lock case hand. one, and only, screw you need to remove to change the hand of the lock. Photograph eight, shows the lock on the left is handed RHRB or LH, and the one on the right is handed RH, or LHRB. Simply lift the latch out, and turn it over to change the hand of the lock.

The installation of the six locks took me about 52 hours with the



8. The lock of the left is a RHRB, or LH, and the lock on the right has been changed to a LHRB, or a RH. Just take the latch out and turn it over.

"scoring," repairs, and listening to a repeat of the earlier history lessons. However, I figured six hours to do the job, so I came out in pretty good shape. Considering that I charged my normal service call, my regular hourly rate, plus 22 times my cost for the locks, it was a fairly profitable day. Even taking into account the cost of the aspirin! §

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by Carl Cloud

## Safecracking Frenzy!

*"I had acquired a group of locked safes and invited locksmiths and safe techs for a day of opening and learning."*

A horde of safecrackers (43) descended upon San Diego, Sunday morning, February 21. Their object was to open every safe in sight — and that mission was accomplished!

The event was sponsored by myself and was held at Woody Mowery's A-I Lock & Safe Co. in downtown San Diego. I had acquired a group of locked safes and decided to invite those in the trade, locksmiths and safe techs, for a day of safe opening and learning.

The participants were presented an array of safes to challenge the beginner and the seasoned technician.

On the beginners end of the event, was a Major fire resistant safe, a Meilink record safe with an S&G 6709 lock; two floor safes, a Star round liftout door and a square door Adesco. A nest of four Johnson Pacific "B" rate safes, with locks mounted left and right hand, provided a good opening practice.

For those with a little more experience, a Diebold "E" rate lug door money chest — two hinged round door safes, an "E" rated Major and a Star TL15 money chest. Plus a Mosler G.S.A container with two interior combination locks was offered for sacrifice.

For those looking for a challenge, a TL15 "Safeguard" by Diebold stood waiting. But the safe to separate "the men from the boys," was a five thousand-pound Herring Hall Marvin mini vault. I had acquired two of these from a bank — a set of bookends, one with a right-hand door the other a left-hand door.

One safe was unlocked, the other locked. The crane hinged door with a compression bar was controlled by two Yale offset drive combination locks. The doors were laminated steel, 5-1/4" thick. Both combination locks must be unlocked to open the vault. The open vault, although an opposite handed door, did offer some drill point clues.

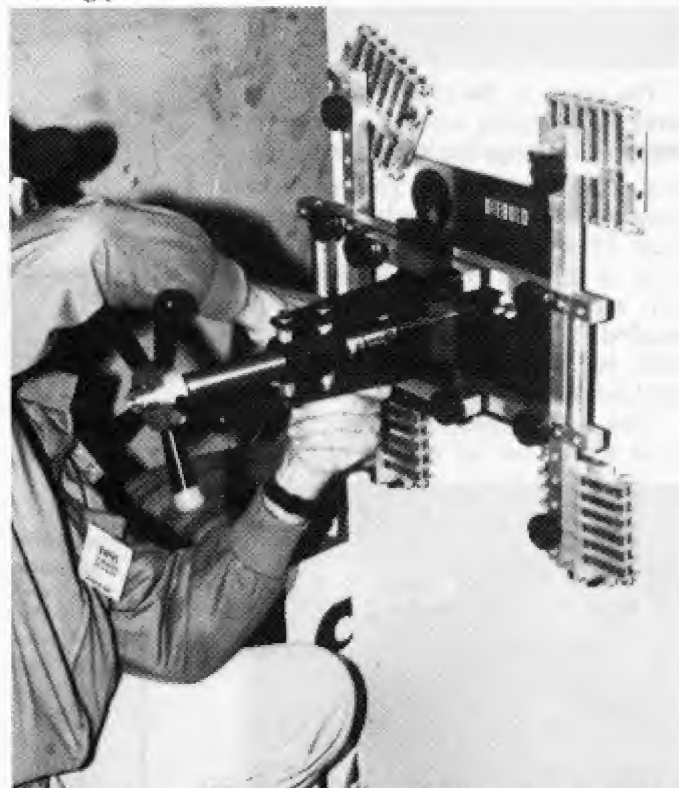
Two special guests attended the event. Ed Willis, the gentleman who produces those great line drawing templates of safe doors, accepted the invitation. What a great product and a terrific safe opening aid for the safe technician! If available, a copy of his template was placed with the safe to be opened for the drillers' use.

The other guest was Bob Volosing, the designer and producer of Strong Arm carbide drill bits and drilling rig. Bob graciously offered the use of a Strong Arm drill rig and provided all the carbide drill bits used for opening the safes. I personally believe that his pressure bar drill rig is the best designed and the safest operating unit on the market. I have tried many drill bit brands over the last thirty years.

Another drill rig was loaned for use and evaluation by John Cannon. John is the education committee chairperson

for A.L.O.A. and owns Locks Unlimited Inc. in Alexandria, VA. John has just recently begun marketing his new magnetic drilling rig.

Unlike the other magnetic rig presently being produced, the four magnet pads are made up of strips of magnets. (See photograph 1.) The strips are free and independent of each other. When the pad is placed upon an irregular or rough surface of the safe door, each strip can seat itself for the best adherence, thus gaining the highest holding power.



1. John Cannon's new magnetic drill rig being aligned to drill a Diebold TL15 Safeguard.

The magnetic drill rig was used successfully to open two of the safes. The rig is very well built and engineered. Upon taking it out of its carrying case, it appears to be a real jigsaw puzzle to assemble. Once you see it in operation and understand how diversified it is, you can appreciate its simple but complex functions. This is the next generation of the magnetic fixed drill rigs.

Tony Rauschuber from Fibertron furnished a focusing viewing scope, free of charge. Not just a scope, but equipped with a color video camera and a twelve-inch



monitor. What great pictures! Everyone was in awe of the fantastic video images the scope created. Before the drilling began, the scope was set up to view the fence and wheel pack of a safe lock. Those who wished to practice, could dial the wheel gates to the fence and watch all the action on the TV monitor. (See photograph 2.)

The morning started by describing each safe. I covered the make and model of the safes, and the combination lock model and its handing. Suggestions were given for a method to open each safe. Some safes had a set of complete opening instructions attached to the door.

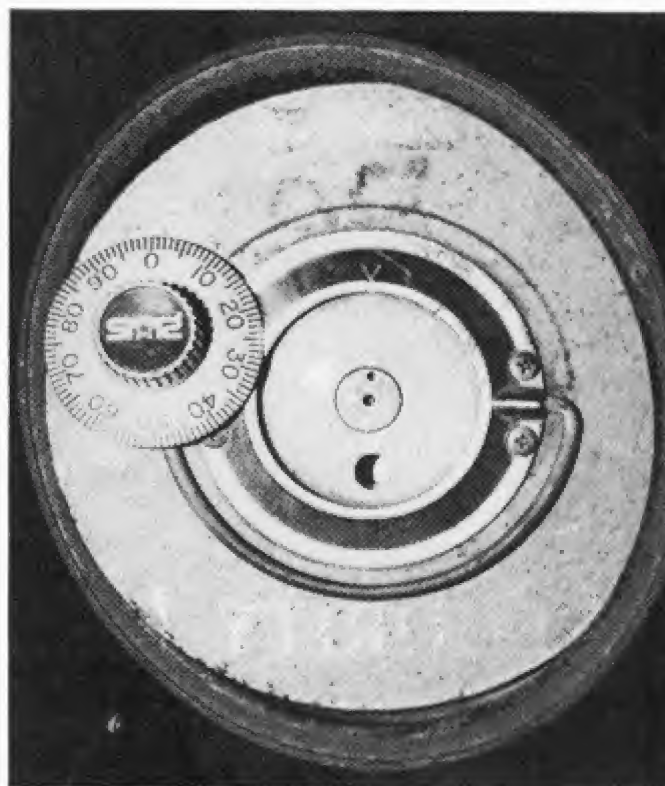
A safe lock drill template was placed with each safe to clarify and pin point drill locations. Specialty tools such as otoscopes, hole saws, dial pullers etc. were available to



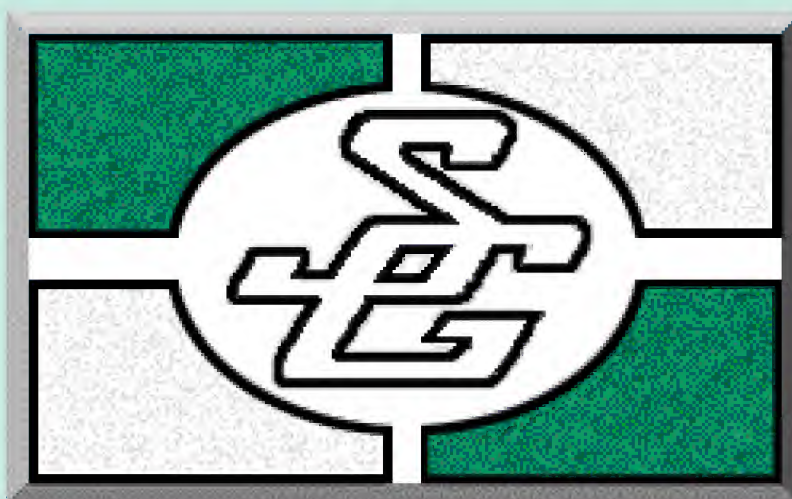
2. Aligning wheel gates to the fence with the use of a Fibertron color video scope.

borrow. After a question and answer period, the frenzy was on!

The Star round door floor safe in photograph three was



3. Star floor safe. Oops, drilled at the wrong location. Had to transfer this one open!



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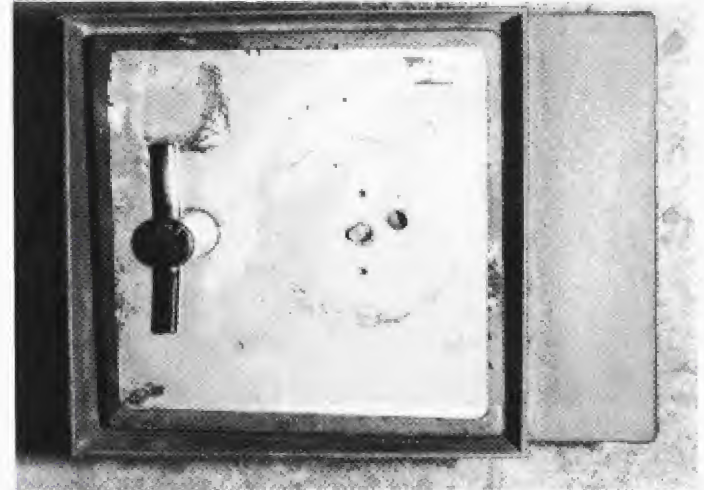
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drilled at the wrong location. The 7/8 at 41 drill location was taken from the changed index line, which placed the hole eight numbers beyond the fence area. Lesson learned; check your measurement twice before drilling once! This mistake offered an opportunity to practice transferring. The combination numbers of the wheel gates were read at the drilled hole. An index line was drawn eight numbers to the left of the hole. The combination was run to the drawn line, transferring the wheel gate to the fence, and presto, it opened!

In photograph four is an Adesco lift out square door floor safe. The drilled hole was perfect for viewing the fence of the S&G lock. Photograph five shows the back of the door and the vertical up position of the lock.

Bill Woock poses beside his trophy, a "E" rate Diebold lug door safe in photograph six. Bill could identify this safe



4. Adesco floor safe with drilled hole.

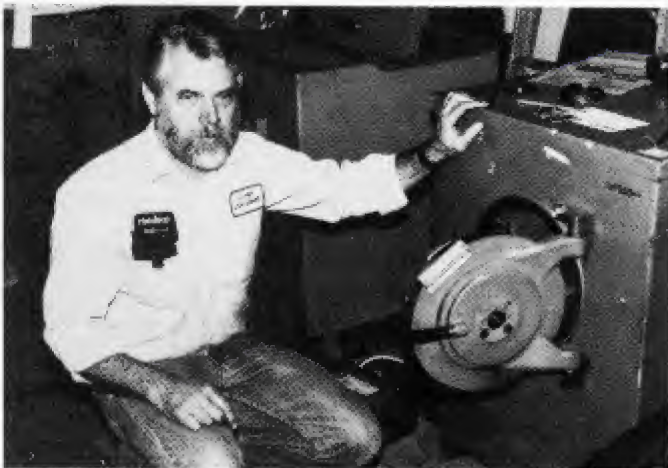


5. Inside of Adesco door. Lock is mounted vertical up.

*Continued on page 96*



Continued from page 94



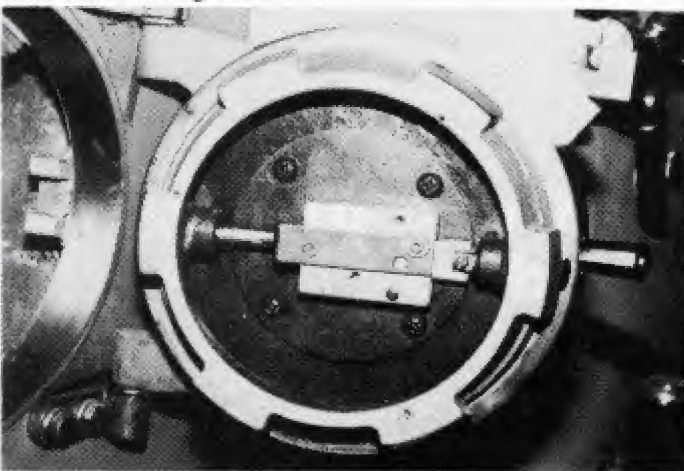
6. One of the first safes opened, an "E" rate Diebold lug door by Bill Woock.

lock by its opening feature — you must push the dial in at zero to engage the nose of the lever into the drive cam gate. This anti-manipulation action, similar to the final opening of a Star round door safe, identifies the lock as a Diebold model 180.

The gate of this nylon drive cam is cut only half way through. By pushing the dial inward, the lever nose clears the full diameter portion of the cam and drops into the cut out gate.

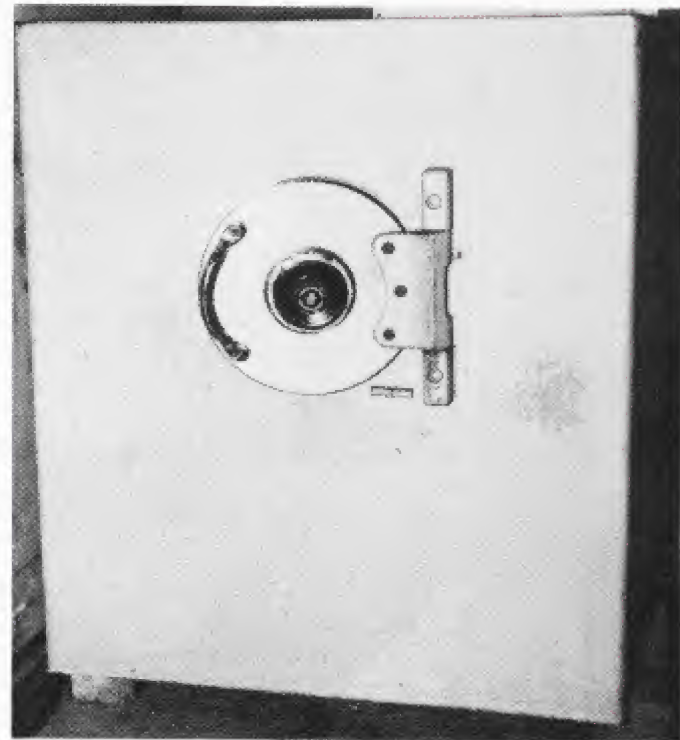
Usually, to drill for the fence area, the dial must be pulled off the spindle or reduced in diameter with a hole saw. This Diebold dial had a steel face which would indicate you should not attempt to pull the dial. Upon inspection, Bill noted the black finger grip portion of the dial unscrewed, which in turn, released the face of the dial. The dial, in effect, can be removed without any damage and reinstalled for use.

Photograph seven shows the interior of the door. A spring loaded relocker bolt faces toward the hinge side of the door. The Diebold lock, mounted right hand, has an extended locking bolt.

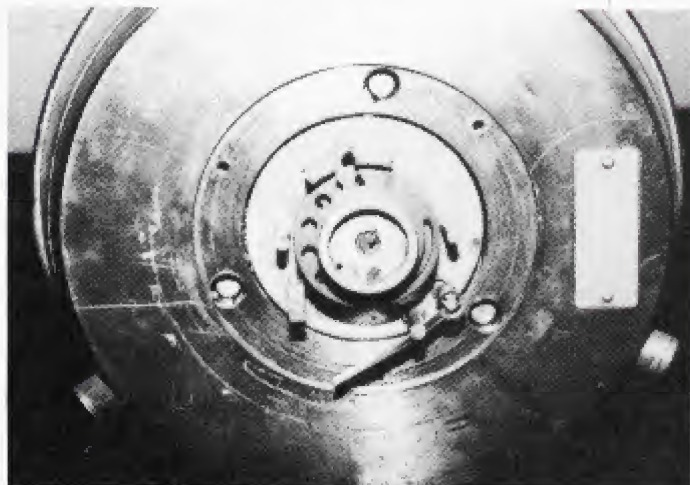


7. Inside view of the Diebold round lug door.

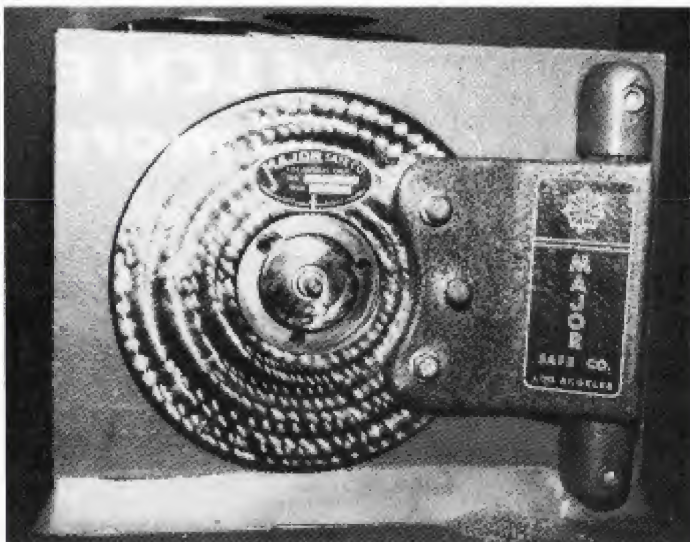
The Star hinged round door in photograph eight has a TL15 label. The lock is the same as used in Star's standard tri bolt doors. An importance difference is the drill location. When the door is hinged, the drill point becomes 7/8 at 28. Photograph nine shows the perfect hole between the fence guide posts.



8. Star TL15 round door chest.



9. Drilled hole in perfect location to view the wheel gates and fence.



10. Major round door safe. Why three holes?

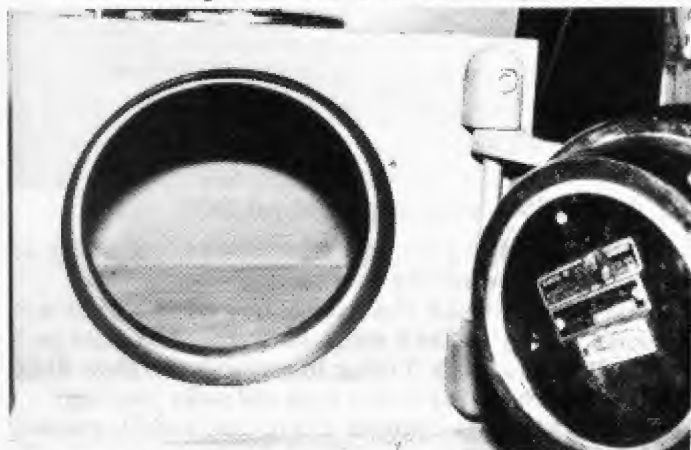


Continued from page 96

Another round door challenge was the "E" rate Major in photograph ten. Why the three holes in the door? There are only three possible drilling locations for the dog pin within this door. If you have the serial number of the door, Major will furnish you with the drill code. By using a Major template, the code will show you the exact location to drill for the dog pin. With the pin punched through, the cam may be revolved, retracting the three locking bolts.

What do you do if you don't have a template or serial number? Realizing the dog pin is always located to the left side of a locking bolt, it is a matter of locating the positions of the three bolts. If you look carefully in photograph 11, there is a small hole at about two o'clock, just outside the door opening.

With the hinge unbolted from the door, the door can



11. Hole drilled to locate locking bolts.

now be rotated within the safe body. A stiff wire was fed into the hole and the door was revolved. When something was felt hitting the wire, a line was drawn on the door face from the hole to the center the door. By repeating this process, the positions of the three locking bolts were found and their locations drawn on the door face.

To find the dog pin, measure 1-1/8" from the center of the dial and about four dial increments to the left of the locking bolt center line. A small diameter ball bearing sets on top of the dog pin. The bearing is just about a quarter of an inch below the door surface. If you drill into the door and don't hit a ball bearing, it must be at one of the other two locations. With a little luck, you'll find it at the next location. If not, you'll have three dimple holes as seen in the photo. This was a good learning safe opening!

The next safe waiting in line was a Diebold TL15 "Safeguard" as seen in photograph 12. The door is controlled by Diebold's 178 model combination lock, which in reality is a LaGard 3300 series lock. See photograph 13.

Lets go inside to understand this beast a little better. See photograph 14. The inside of the door is covered with a light gauge metal sheet. After removing this outer cover, you'll find a second formed plate. (See photograph 15.) This plate is not secured. It is held in place by the outer door cover. As you pull this plate away from the door, you'll hear the five spring loaded locking bolts fire. Each of the locking bolts acts as a relocker! Photograph 16 shows the door with the plate removed.

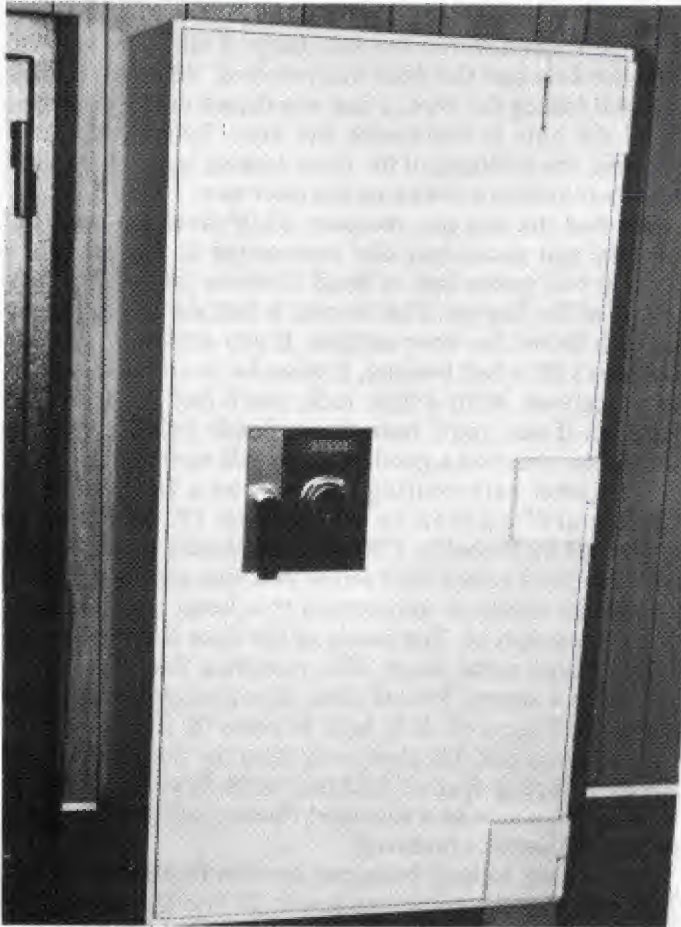
One of the locking bolts can be seen in photograph 17. The plate has matching notches to fit into the cut groove seen in the bolts. In photograph 18, you can see the notches of the formed plate. When the safe door handle is

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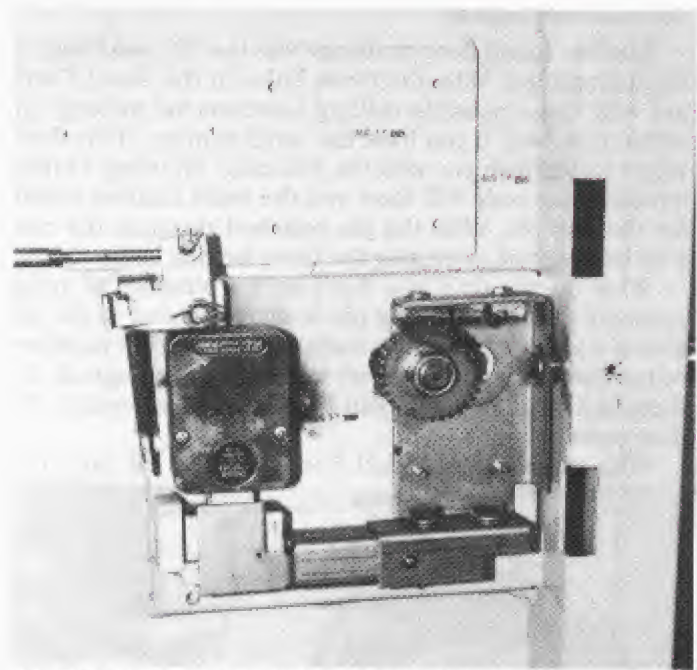
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12. Diebold TL15 Cashguard chest.



13. Diebold lock is actually a LaGard 3300.

turned, the entire plate moves sideways, retracting or extending the five locking door bolts.

The five bolts on the hinge side of the door are stationary. They act as a guide for the formed plate as it slides back and forth. Trying to reinstall the plate while holding the five spring loaded bolts will make your day!

Photograph 19 is a Mosler G.S.A. map and file cabinet. The dial of the 8400 series MP lock has been reduced with

*Continued on page 102*



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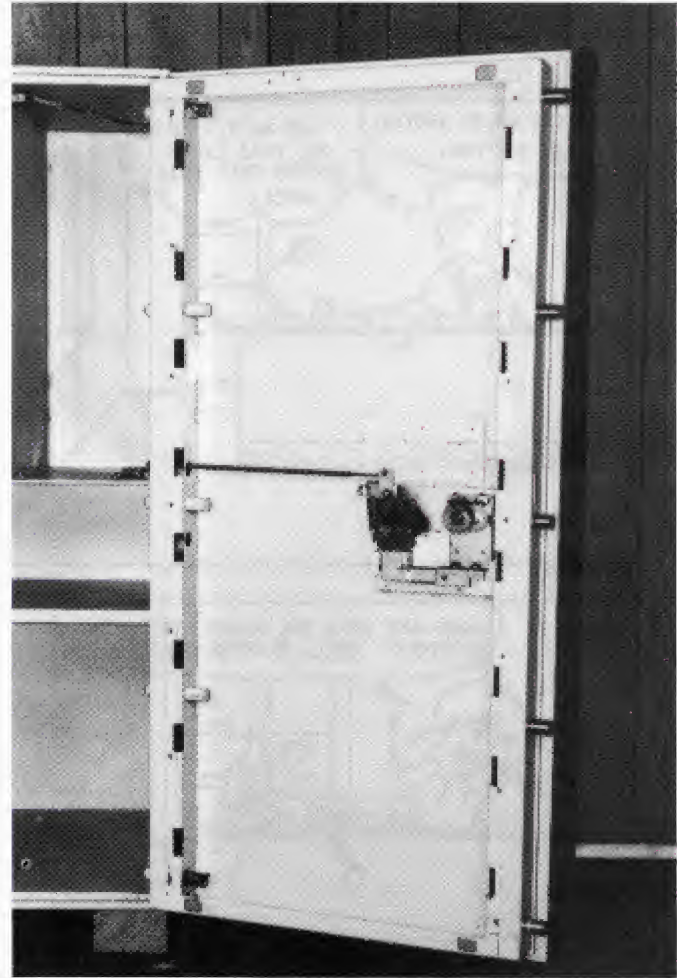
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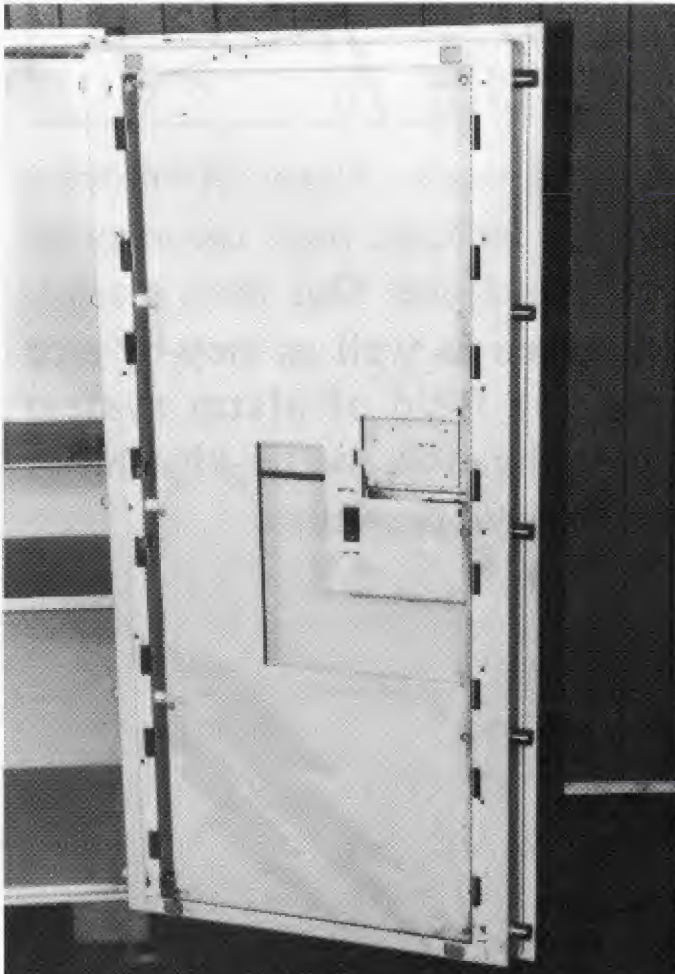
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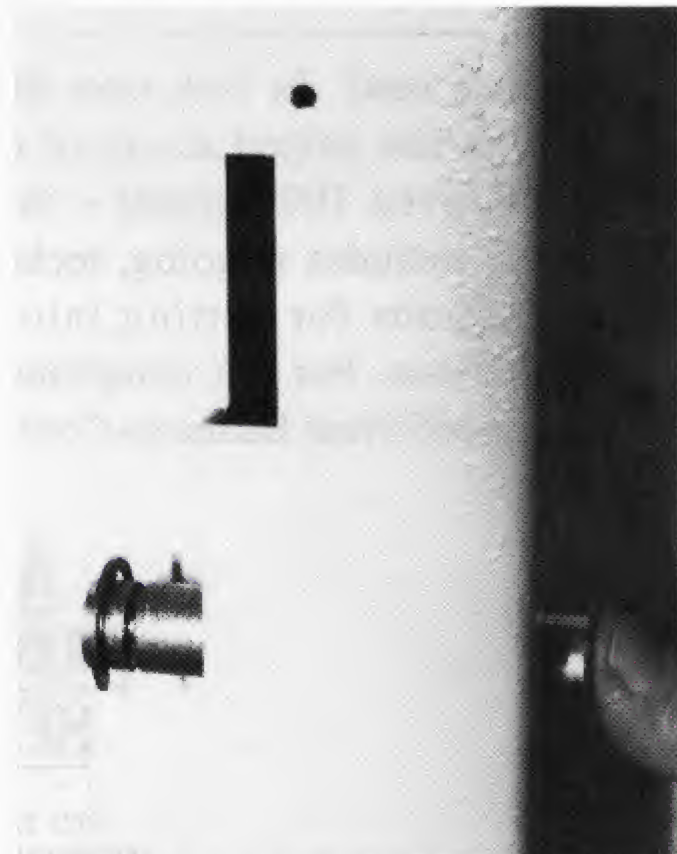
14. Cover plate on inside of door.



16. The view of the door with the plate removed.



15. The second formed plate operates the locking bolts.  
102 The National Locksmith



17. View of the independent spring loaded locking bolt.

Continued on page 104

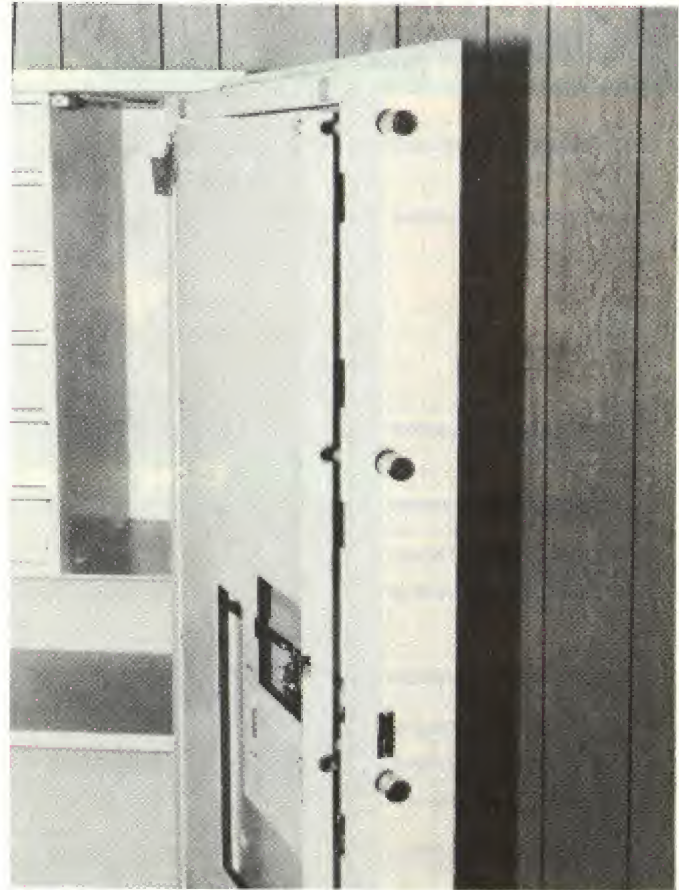


Continued from page 102



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18. Notches on the formed plate engage into the slots of the locking bolts.



19. A Mosler G.S.A. map and file cabinet.



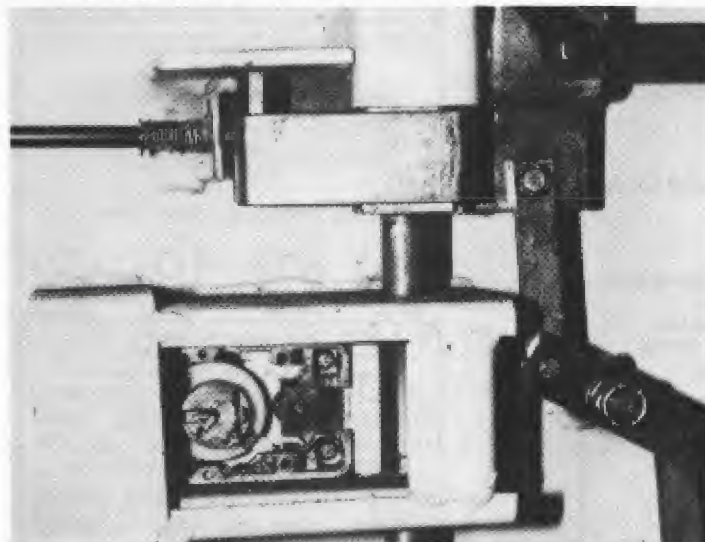


20. Boltworks of the Mosler G.S.A. safe.

a hole saw. Penetration was made at the 97 x 7/8 as seen in the photo. The bolt works can be seen in photograph 20. The right hand mounted lock is completely contained within a hardened lock box case. (See photograph 21.)

The star of the event is pictured in photograph 22. This is a Herring-Hall-Marvin mini vault with a left-hand swinging door. The dimensions are; 54" high, 29-1/2" wide and 36" deep. It weighs 5000 pounds. The tapered door is 5-1/4" of manganese with laminated sheets of hard plate. The inner workings of the door and a close-up of the Yale offset drive locks can be seen in photographs 23 and 24.

The Yale locks were set on different combination



21. The right hand S&G lock is contained within a case of hard plate (Lever has been removed from lock.)

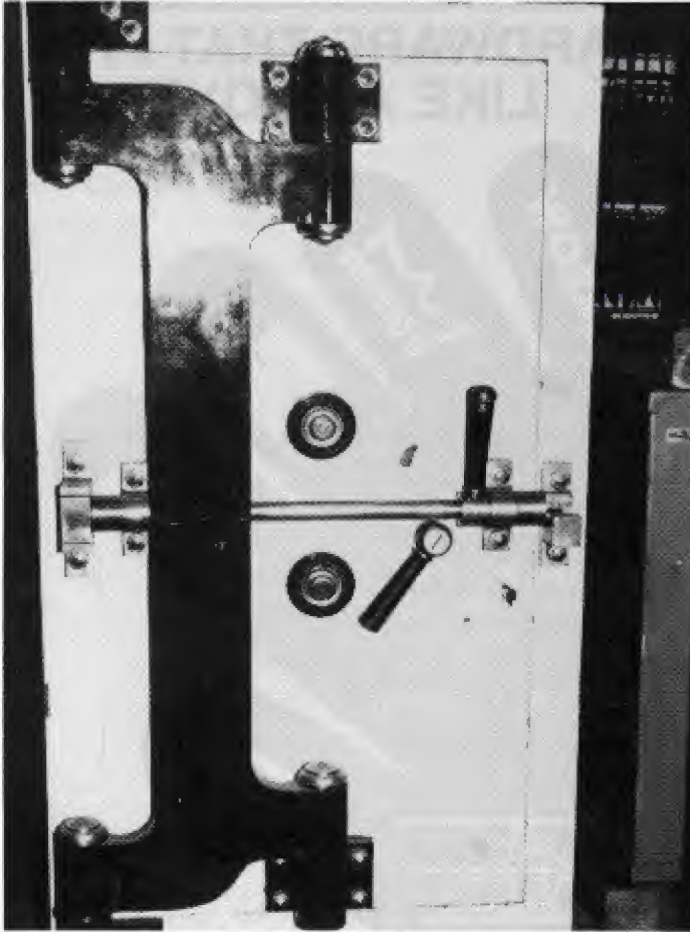


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22. Herring Hall Marvin mini vault.



23. View behind the vault door cover.

*Continued on page 169*



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## Auto Opening...

## 1992 Toyota Camry

*"There are several ways to open the Camry. The two we used worked well."*

**T** Despite the new split wafer key system that Toyota introduced on the 1992 Camry (see photograph 1), opening and making keys for it are still very simple.



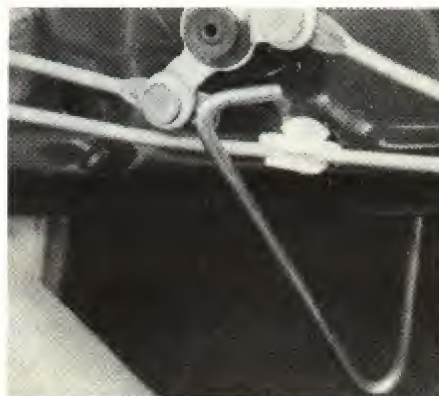
1. The 1992 Toyota Camry.

Even with the heavily covered lock linkage, opening the car isn't harder, it just means doing it a different way. In fact, while there are several ways to open the Camry, the two we used worked well. In the first entry we used a tool as shown in photograph two. The tool was inserted into the door twelve inches from the window edge and lowered just below the window. Photograph three shows how the tool was raised up underneath the interior side of the door to the bottom side of the lock bellcrank. The bellcrank was pushed towards the front of the car to open. With the door panel in place the tool fit very tight as it was necessary to break through the plastic weather barrier.

The other method opened the car in about as much time as it takes to use a key. Only in this case we used a screwdriver. Pulling up on the rear door handle we inserted a long thin screwdriver through the handle hole on the side nearest the front. (See photograph 4.) Directly behind the hole is the horizontal lock linkage. We pushed the rod down and towards the rear of the car. This forced the button to a partially opened position. Withdrawing the screwdriver and releasing the handle allowed the



2. Inserting the tool as shown.



3. How the tool looks inside the door.



4. Insert a screwdriver through handle hole as shown.



5. This door panel must be removed.

button to move the fully open position. Voila!

To make a key for the car we removed the passenger side door panel. (See photograph 5.) Only a few tricks are evident here. First, and typical Toyota, is the panel screw hidden beneath the light on the panel. (See photograph 6.) Next was the trim buttons on the door panel edge. (See photograph 7.) Do not pry them out. Instead, press the center of the



6. A screw is hidden beneath the light on the panel.



7. Remove the trim buttons



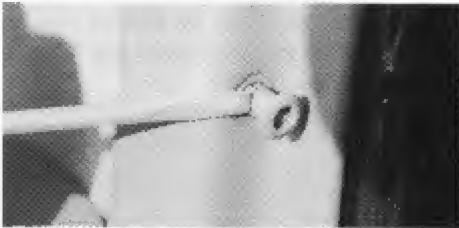


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buttons in with a tool. (See photograph 8.) Then gently pry them out. (See photograph 9.)

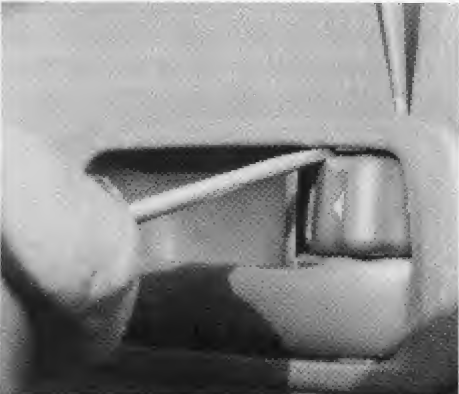


8. Press the button with a tool...



9. ...then gently pry it out.

The final challenge was to remove the inside handle without destroying it. As seen in photograph 10 we first lifted the backside of the trim up and away from the lock button. We then

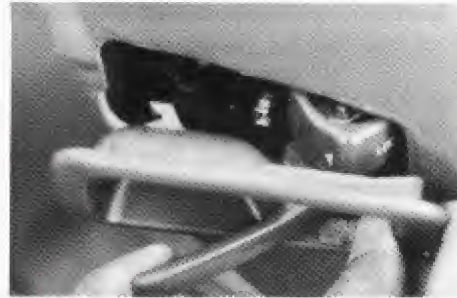


10. Removing the inside handle. Lift the backside of the trim up and away.

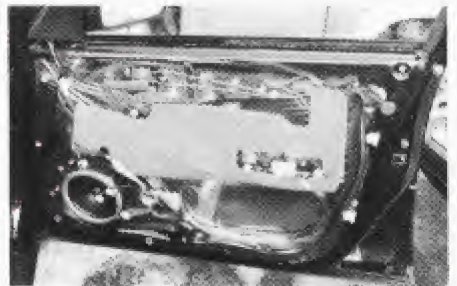


11. Pulling the bottom portion free.

did the same to the bottom by the handle. (See photograph 11.) With the back free, we pulled the trim piece towards the latch side of the door to release it from the door. (See photograph 12.) With the handle trim and all the fasteners removed, we were able to lift the door panel up and out. (See photograph 13.)



12. Pull the trim towards the latch.



13. Door with panel totally removed.

Pulling down the plastic, we removed two 10mm bolts that held the handle to the door. (See photograph 14.) With the linkage still connected to the lock and handle, the handle tilted out just enough to read the key code. (See photograph 15.)



14. Removing the door holding bolts.



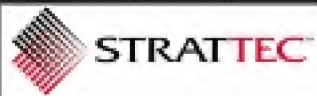
15. Tilt out the handle to read the code.



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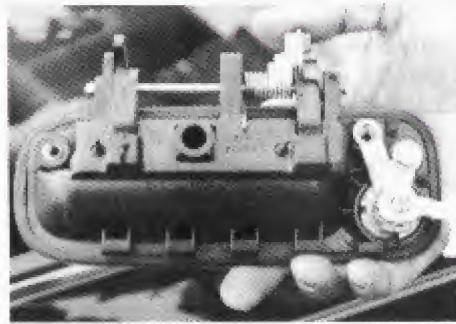




Unfortunately, this code was not quite readable, and we had to remove it from the door.

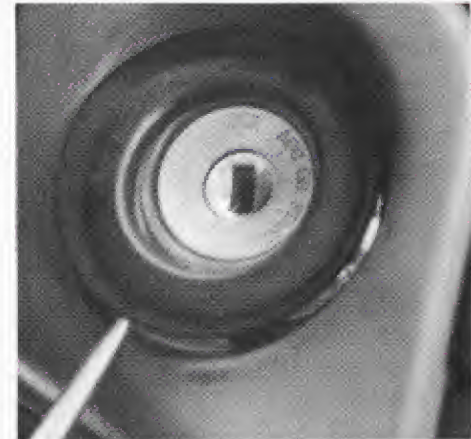
Disconnecting the linkage we were able to maneuver the handle out of the door. Like the 1992 Celica reviewed in the September 1992, the lock is not only attached to the handle, it is also attached to the car body. This means the entire handle must be removed to service the lock. (See photograph 16.)

Removing the ignition is also fairly easy. First, gently remove the rubber and plastic covering from around the



16. The handle, removed.

lock face. (See photograph 17.) On this particular model it is necessary to remove the light lens. (See photograph



17. Gently remove the covering.

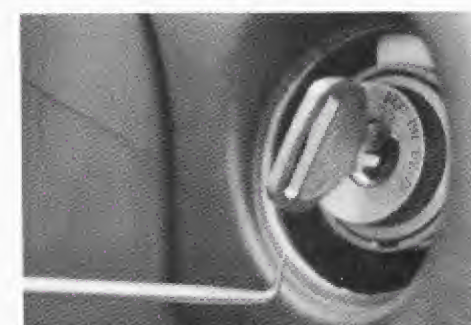
18.) Undoing small tabs at the top and bottom of the lens will release it. (See photograph 19.) Then, with the key in the "ACCESSORY" position, use a 90 degree scratch awl or similar tool to depress the cylinder retaining button. (See photograph 20.)



18. Undo tabs at the top and bottom...



19...to release the lens light.



20. Depress cylinder retaining button.



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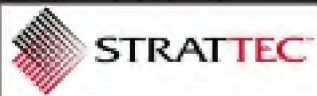
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To locate the button, look at the lock face at about the 5:30 position. On the lock housing you will see a narrow gap that is part of the cylinder retaining pin ramp. Insert the tool straight back, directly below this point. (See *photograph 21.*) the button will be 1-5/8" back from the edge of the lock housing. (See *photograph 22.*)  
§

#### Industry Interview:

Sean DeForrest



With an eye on the future, Sean DeForrest envisions a bright future for the locksmith industry. While not a locksmith, Sean has seen the locksmith and security industry from the shoes of a wholesale distributor. Starting with American Lock & Supply in 1974, Sean is currently its president. During this time he has completed a Bachelors Degree in Finance and a Master's Degree in Business Management.

From this perspective, Sean has had the time to observe and evaluate the industry. And in spite of the spiraling changes taking place in our trade, Sean doesn't limit himself to mere reflection, but offers positive and achievable goals to locksmiths that want a place in the future.

"We are just in the beginning of megatrend demand for security," says Sean, "The need for security products and systems is going to skyrocket in the decade to come."

"Security is moving towards more and more complex solutions," he said.

"As we move towards the future, those involved with security must have the ability to integrate different products, services and systems."

"Security will mean taking on the

*Continued on page 171*

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## Auto Opening...

# Handling Horizontal Nissans

*"Many Nissan models have similar lock systems that can be opened using the same techniques and tools you already own."*

The new Altima and Quest Van by Nissan (starting in 1993) have been causing many automotive lockout technicians difficulty the past few months. Research was being done on these models while getting the '93 5th Edition Z-tool System ready for release. Opening these new models was successful using a method already known by Z-tool users as opening method 18A.

The 18A method has been in the Z-tool system manual since the 1990 3rd Edition when it was first used to open the 1990 and up 300ZX and the 240SX. We are now three years down the Nissan production line with more new model introductions that are also equipped with similar lock systems that can be opened using the same opening techniques and tools you may

'93 Quest van and the '93 Villager which is the same vehicle only with a Mercury name plate. Also, the Infinity M-30 and its replacement model J-30. Even the Mazda '91 and up 929 can be opened this way. This horizontal lock system set up looks like it will continue to be installed into future new model introductions.

The key to this opening method is to utilize the depth guides on your Z-tool as the bell crank target is small. The vehicle index guide of your manual tells you which depth guide to use as the intended target location is different on the respective models.

First begin by entering the door's cavity by inserting the large end of Z-tool at the right side of the outside door handle. (See illustration 1.)

Enter at the right side of outside

bell crank. You will see the manual lock button move when contact with bell crank is made. The vehicle index guide will supply you with other helpful hints as it applies to each of the respective models.

The Z-tool System Manual is updated and revised every year. This years manual grew by 25% over the '92 fourth edition set adding over a hundred new models such as those covered in this article and is available at this time. One last note to all who perform automotive lockouts. This year is the biggest year ever for new model introductions and you can count on the future of openings being even more difficult as its not only the high end expensive models presenting a greater challenge, but, also the inexpensive models are being

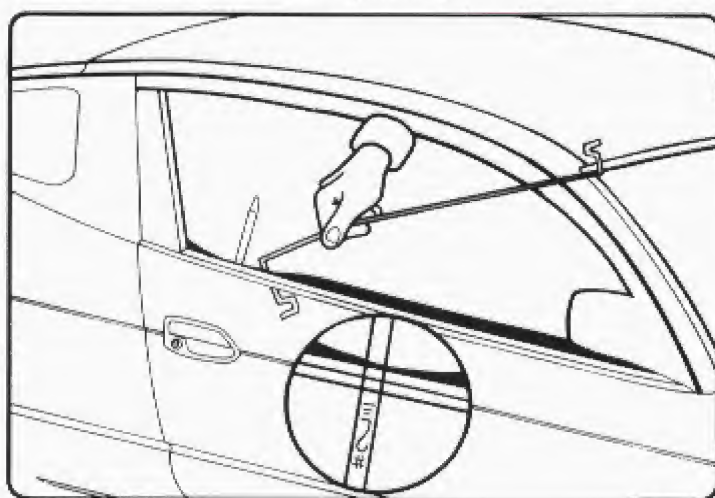


Illustration 1

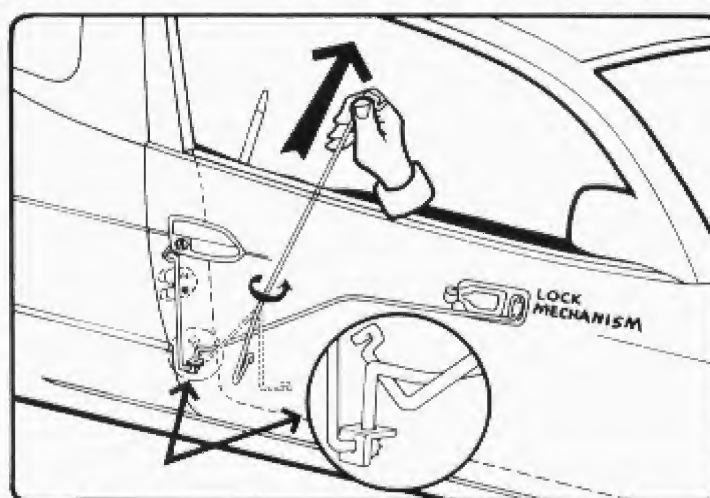


Illustration 2

already own.

Because this type of locking system is common to the 1990 and up Nissan and Infinity using the horizontal buttons, learning this opening method is important.

This list of vehicles using this system include: Nissan's '90 and up 300ZX, '90 and up 240SX, '91 and up Sentra 2 dr., '91 and up Sentra 4 dr.,

door handle. After you have determined the depth guide to use from the vehicle index guide, simply sweep your Z-tool under the bell crank and lift to open. (See illustration 2.)

This is not a tough group of models to open after you have worked on one of them successfully. They all take a little bit of time probing for the illusive

equipped with illusive lock systems. There is only one way to keep up with all these new models and that is to consistently stay up-to-date as the information is prepared and released for invaluable use in the field.

For more information contact: Doug Selby, Slide Lock Tool Co., 1166 Topside Rd. Louisville Tn 37777, (800) 336-8812. §





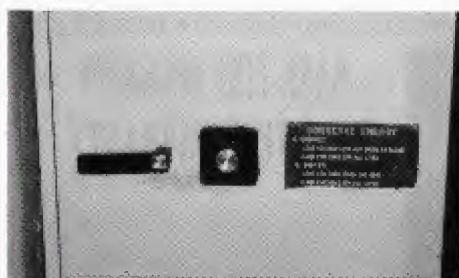
by Dale Libby

## MOSLERsicle

*"The safe in question was a Mosler money chest with a frozen wheel pack."*

The title of this article is my way of saying that this article concerns the working on a Mosler lock that has "frozen" in position and cannot be dialed open by normal means. In mechanical language, when the term "frozen" is used, it signifies that something cannot move or budge, and not necessarily that it has been physically frozen by a temperature drop to below freezing.

The container in question was a large Mosler Money chest with a horizontal opening handle and a square housing over the spy-proof dial ring. In fact, it looks exactly like the handle and dial in photograph one. From the closeness of the dial and handle ring centers, we must surmise that the lock is mounted either vertical up (VU) or vertical down (VD).



1. The "frozen" Mosler dial on a Mosler money chest. Note position of opening handle to combination lock.

When dealing with Mosler safes and locks, in these situations I assume that the lock is mounted vertical up with a large blocker plate attached to the end of the combination bolt. This is the standard configuration used in these safes.

The money chest was located in a large establishment that caters to kids. It has a thousand video games, baseball games, basketball hoops, giant puppets, and pizza. That night the managers had to get into the unit for tokens and money. Parking was a

problem, as well as wading through the throng of "munchkins" to get to the safe. Working on the safe, once Little Tommy and I got to the vicinity of the Mosler, was harder than actually opening and repairing the safe lock mechanism.

We turned the dial left and right. It would only rotate one revolution and stop at 45 on the dial, no matter which way we turned. A frozen wheel pack. We had to determine if the safe lock was able to be dialed open, and what parameters had to be used to see how our progress was proceeding.

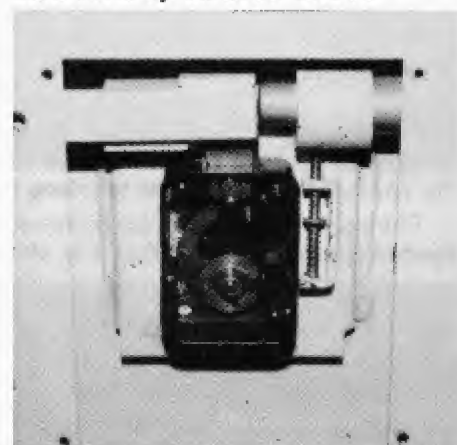
We checked for the drop in area and it was found to be between 95 and 5 on the dial. This was expected and meant that the opening cam on the dial spindle was working. What was somewhat unusual, was that these units come with the Mosler MR302/402 combination lock, the dreaded and diabolical "clickityclick" lock. Someone before us had removed the anti-manipulation feature when the safe was previously serviced.

I looked at Little Tommy Powers, and he looked at me. We nodded at each other. A classic University of Chicago lock opening. Tom turned the dial very forcibly to 50. This took both hands, and he first thought that he had stripped the splinning of the dial on the ring and had not moved the wheel pack.

There was an easy way to check this out, however. We just turned the dial back to the opening "drop-in" area and took another reading. If, in fact, the dial had moved on the spindle and not moved the wheel pack, the drop in area would have also moved 5 numbers higher, as the dial had when we coerced it 5 numbers higher. It did not. The drop in and indicator points were in the same place. Thus, by forcing the dial, we had moved the wheel pack 5 numbers and kept the integrity of the dial and spindle intact.

It now was time to open the safe lock on this money chest. We forced the dial around to the existing combination by using both hands to slowly turn the dial. Gratefully, when we reached the last number and turning direction, the locking lever dropped in the opening cam and the bolt withdrew and the unit opened. Half the job was done.

If we look at photograph two we will see the inside of the chest with the back cover plate and the wheel pack removed from the Mosler black case MR302/402 combination lock. The lock is mounted VU and directly to the right of the lock, in this picture, is the spring loaded relocker. This relocking device is held in place by a metal contrivance attached to the back cover by the cover screws.



2. The back of the opened unit with plate and covers removed. The lock is VU (vertical up) with the relocker just to the right of the lock.

What one cannot see in photograph two is the large block that is attached to the end of the Mosler combination lock bolt. Luckily, Tom had a new Mosler lock for replacement purposes and we would not have to modify a new bolt. We replaced the entire lock, but used the existing lock bolt with blocker from the old lock in the new



application.

We changed dials and used a LaGard/Mosler dial that had a 1/4 x 28 threading to fit into the new split cam. This spy-proof dial can be seen in photograph three.



3. The new dial and ring that we used to replace the old square dial ring.

What was wrong with the lock? After removing the wheel pack located on the back cover, we saw the problem was that the third wheel (the wheel closest to the driver and the third number of the combination) had formed a groove in the wheel post; it fit so tightly that we had to force this wheel off with a screwdriver before we could remove the number 1 and 2 wheels. See photograph four to see the groove at the top of the wheel post.



4. Grooved wheel post on back cover of Mosler lock. This is trashed.

Why had this wheel formed this groove and what caused it? I do not know any one reason, except sloppy servicing. The customer stated that they knew the combination was getting harder to turn and that is why one week before they had the lock serviced by and the combination changed by our company. Tom and I had never even been to this suburb before, and we certainly had not serviced this safe lock. We did do work at several different locations for this chain, but this was our first visit here.

Whoever had previously worked on this unit had mickey-moused the drive cam, and had not lubricated anything. They also did not stand behind their work. The lock was a hand change lock, so that anyone changing the combination would have, and should have noticed the wear on the wheel post. Take some time and inspect the locks you work on for wheel wear. Replace and Prosper! §

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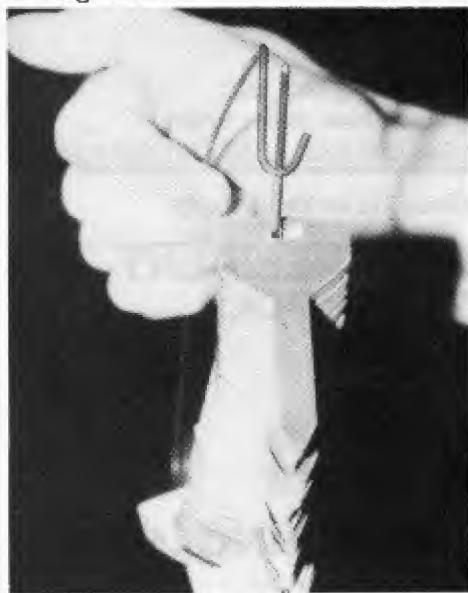


## Take A Tour With Tom...

by Tom Seroogy

"And, what country are you from?" asked the census taker. "Milwaukee! Nyuck, nyuck, nyuck," replies Curly in typical Three Stooges fashion.

From the bridge that went nowhere to the gigolo judge, to the more recent water contamination, Milwaukee is the brunt of many a joke for politicians, larger cities and even the big screen.



1. These keys just started their short journey to completion.

Yet, it is here that both Briggs & Stratton and the Master Lock Company have their roots, establishing Milwaukee as a major national and international contributor to manufacturing technologies and security hardware.

A recent visit to these companies left many unexpected impressions.

### Briggs & Stratton

My first stop was to Briggs & Stratton, just off I-43 on the north end of Milwaukee. What was my impression?

Quality! The first and final

## Sweet Home Milwaukee

*"Briggs & Stratton and Master Lock Company both call Milwaukee, Wisconsin home. I'll tell you about my visit to both."*

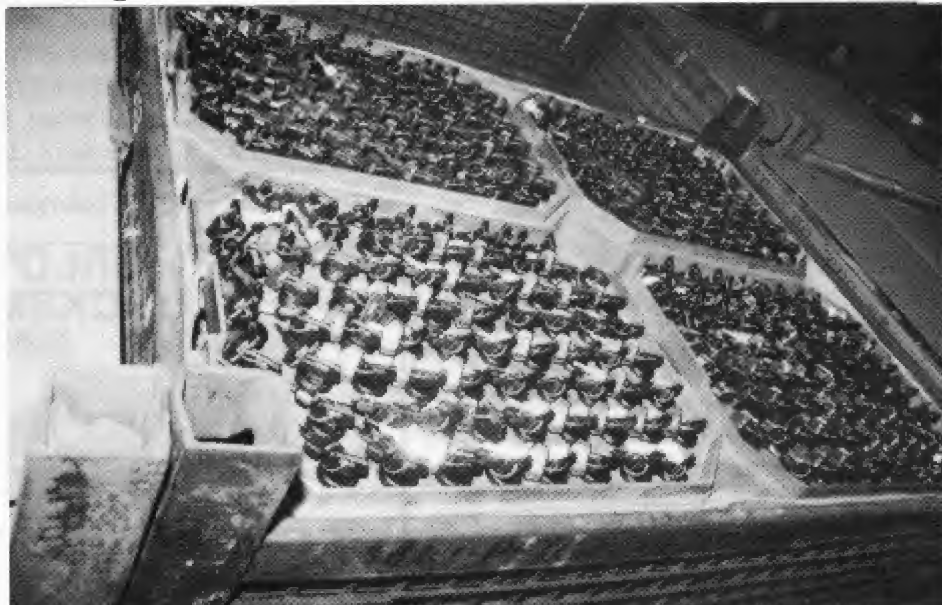
impression.

Briggs & Stratton is pretty much a household name for locksmiths doing auto work. After all, for years they have been producing OEM parts for GM, Chrysler and Ford as well as the service packs we use. Yet, the very element that has made B&S a leading manufacturer of auto locks, is often missed — the demand for quality.

Taking a recent tour of the B&S

have been plated. This procedure allows for a product that holds far better tolerances and produces a much finer finish than plating afterwards. How do they do it without cracking and chipping the plating (see photograph 1)?

Magic, according to Scot Hooper, Manager of Service and Aftermarket Sales for B&S. And magic it is. In fact, many of the manufacturing processes



2. Ignitions anyone? This is just one of the many shipping crates full of auto lock parts that B&S ships every day.

plant revealed just how important quality is to B&S.

Two aspects reveal this concern. First, is the healthy ratio of engineers to production workers. Unlike many companies, there are plenty of engineers at B&S, constantly developing new products and refining old ones. Many of the small parts (like pins, tumblers, and even keyblanks) are produced using tooling and manufacturing techniques not found anywhere else.

Keyblanks, for example, are coined (stamped or embossed) after they

at B&S create in a single step what used to take a whole machine shop hours to do.

The second observation is found in the production area itself. Almost all lock components are developed and made in-house. This allows B&S the ability to constantly observe product quality, and to make any necessary changes and adjustments before the locks are assembled (see photograph 2).

The control of in-house production is also backed by constant monitoring and testing of the product through assembly. Here computers and



automated assembly work together assuring consistency and a high degree of quality (see photograph 3).

Some little known facts about B&S products:

-They are one of the largest and most advanced die casting companies in the country.

-They make the die cast components for B&S motors.

-They make the lock cylinder for the Schlage F series knob, and the die cast chassis parts for Master Lock hardware.

**Master Lock**

My second stop was Master Lock

Company, also just off I-43 in a residential area closer to the heart of Milwaukee.

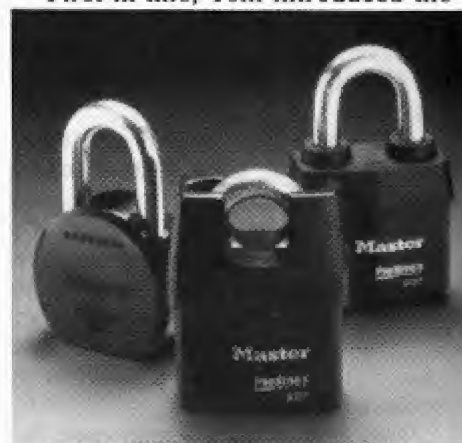
Here I met Tom Smith, Associate Product Manager Padlock Division, Ralph Howard, Product Manager Door Hardware, and Leslie Bonk, representative for Master Lock's public relations firm, Brown and Martin.

Sitting down in a large conference room the four of us discussed some of the new products being offered by Master Lock.

First in line, Tom introduced the



3. these women control the computer that makes the final quality control tests to the B&S ignition cylinder we are all familiar with. This final step tests the ignitions in about 16 different categories.



4. The new ProSeries padlock by Master Lock Company.

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Pro Series line of padlocks for commercial use (see photograph 4).

Now, my view of padlocks may be tainted, and until reviewing some of the advances made with the ProSeries, I figured all padlocks equal and nothing more than a necessary evil, just another piece of hardware to pander.

The ProSeries, however, showed that Master put some real thought into this product. (In fact, the engineering of this lock line is born of interviews with hundreds of hardware distributors and locksmiths from around the country.) The result is improvements that are advantageous to the locksmith as well as the end user.

For example, for the end user, hardened boron alloy steel shackles, shackle shroud, interlocking laminated body (the interlocking design prevents dismantling the steel laminated plates should the rivets be ground away), and weather resistant covers with flow-through debris channels, make for an extremely dependable lock.

This is good for the end user, but how about me, the locksmith.

Well, the locks are rekeyable for four, five and a new six pin cylinder using new and current Master keyways. Because they use spool top pins they are tough to pick or impression. And the biggest advantage to the locksmith is that these units can be purchased broken down. Shackles, lock bodies, cylinders can all be bought individually. This allows the locksmith on-the-spot "creation" of a lock designed for the customer's need. And it eliminates having to stock all the sizes and variations of padlocks, or having to wait to order one.

Next it was time for Ralph's presentation on the hardware. Again, I listened with typical locksmith skepticism.

I was handed a deadbolt and door knob. Not expected was the relatively heavy weight of both, which carry a Grade 2 or commercial rating. Better than I expected.

"What advantage does the locksmith have using your hardware over others?" I quizzed Ralph.

"Well, using our hardware you won't have to stock a bunch of different knobsets," said Ralph.

"Unlike the retail version, locksmiths can buy the lock body, less

the cylinder. Then he can purchase cylinders in several different keyways. This way he is prepared for most situations without having to stock a lot of hardware. He can grab a knob and then choose a cylinder with the correct keyway. It's easier and cheaper."

Other advantages include chassis halves that lock together during installation (holding the unit onto the door while the unit is screwed together), easy to remove cylinders for rekeying, and a rose cover that hides the inside mounting screws (available to the locksmith only).

"Okay, Tom and Ralph," I said, "I'm a locksmith. You want me to sell your product. Why should I sell your product if you're going to sell it to Builder's Square. I can't compete with their pricing. That's why I don't sell your product now?"

I thought I stumped them. I expected stuttering, pauses and a bunch of side stepping. But that's not what I got.

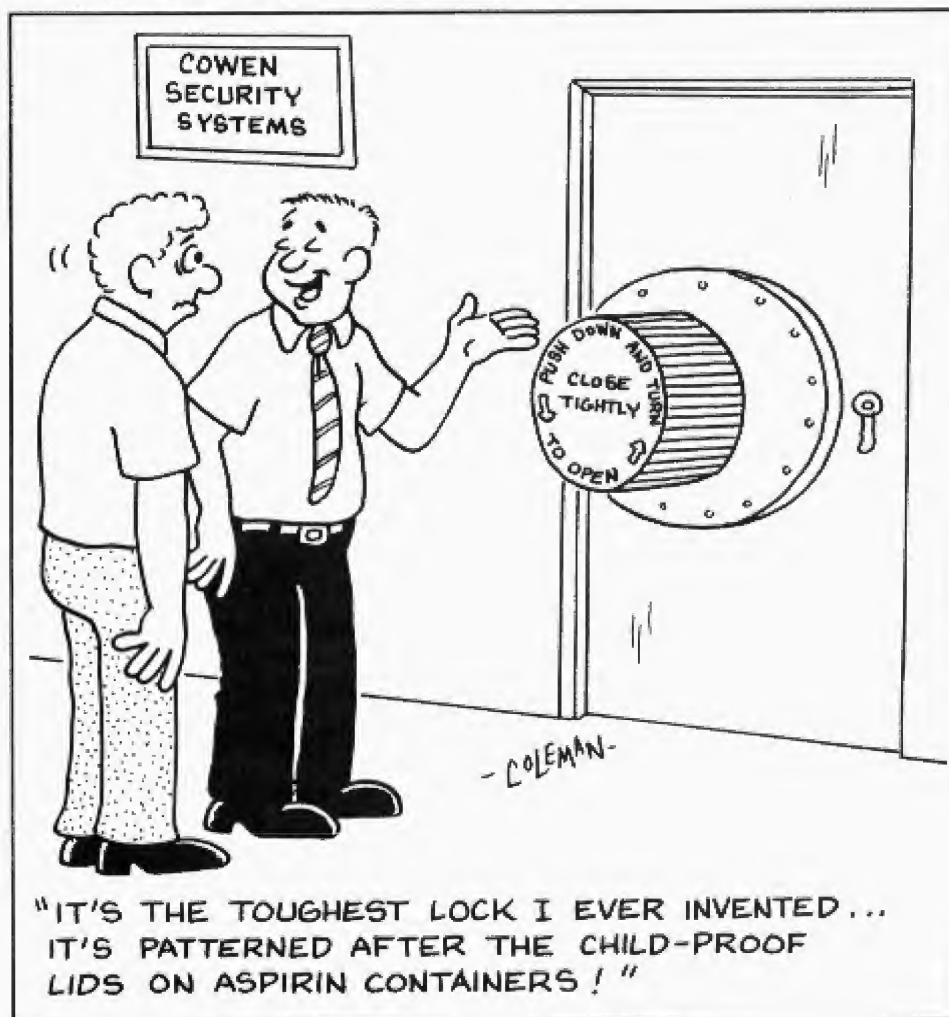
"Simple," said Tom, "the ProSeries line is for commercial use. Therefore we are going to market it through

door hardware distributors and locksmiths only. Stores like Builders Square won't be offered this line.

"Plus, while many hardware distributors may sell directly to the end user, locksmiths are still in a better position for offering service. The locksmith can see the application and offer the correct lock and any additional hardware, plus he can key it to an existing system if necessary. These are services that many customers want but are unable to get from the distributor level."

"And with both the ProSeries and the hardware line," Ralph adds, "the locksmith does not have to spend a lot on stocking the whole line. The ProSeries comes in components that allow the locksmith to build the needed lock for his customer. The hardware line can come less the cylinder, so only the different cylinders need to be stocked. This saves time, money and space for the locksmith.

As a locksmith, they hit just about every point that matters (plus they are made in the USA). §





## Auto Service...

## '87 Supra Trunk Repair

*"The symptom is that the car owner can no longer open the trunk via the release. The problem is a bent pawl."*

**F**requently I get called out to one of my Toyota dealers to rekey the trunk on the later model Supra. In fact, it's frequent enough to be considered a recurring problem that locksmiths will have to, if you haven't already, contend with.

The symptom is that the car owner can no longer open the trunk via the trunk release inside the car. The problem is that the pawl on the trunk lock has been bent to a point where the release cable can no longer pull the pawl far enough to release the trunk latch. The reason for the problem is inherent in the weak, two-

piece construction of the pawl.

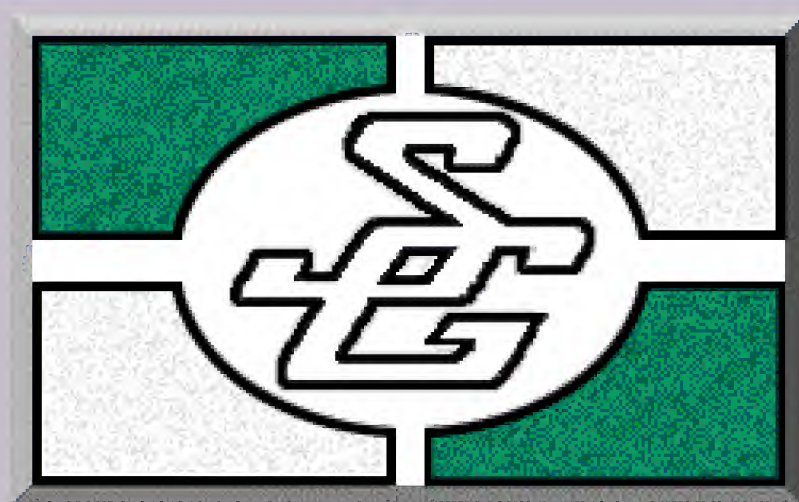
When the trunk is closed with the keyway in the 12-6 o'clock position, it can be opened either via the key or the release lever inside the car. When the keyway is in the 3-9 o'clock (or valet) position, the inside lever release is locked and the trunk can only be opened with a key. The damage occurs in this position. Not realizing that the inside release is in the locked position, the user pulls on the lever. Finding that the trunk did not open, they pull harder, then harder again until finally the pawl bends.

Servicing this lock is time consuming. It is mounted outside on the car body, below the plastic light

trim. (See photograph 1.) To remove the lock, much of the interior hatch paneling and trim need to be removed. It is advisable to mark or segregate the screws and fasteners so



1. The trunk lock is mounted to the outside of the car body, behind the center light panel.



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they do not become lost, and can be returned to the same spot. (See photograph 2.)

On this particular vehicle, I removed the right (passenger) side tail light and all the nuts that held the center light piece in place. It should be noted that the license plate and its screws had to be removed to release the center light piece. The left (driver) side light was left alone, although loosening it up may have let the center piece move more freely than it did. (See photograph 3.)

After disconnecting the electrical connector attached to the lock (inside the car, near the back of the lock) I was



**2. A lot of the interior panelling needs to be removed to gain access to the fasteners holding the lights and trim in place.**

able to pull the center light panel away from the car enough to slide the lock



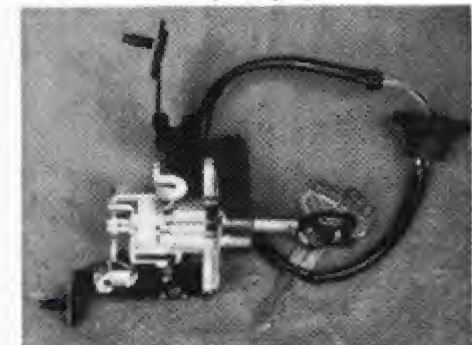
**3. The taillight removed, allowing enough room for the lock to be pulled out.**

out. Two cable releases were disconnected at this point and the lock removed from the car. (See photograph 4.)



**4. The lock removed.**

The next major hurdle with servicing this lock is that it is press fit onto a metal mounting bracket. Despite numerous attempts, I was unable to remove the facecap, which is plastic, from the lock until it was removed from this bracket. (See photograph 5.)



**5. The lock and mounting bracket.**

To remove the lock, I first took off the pawl and electrical switch on the back. These are held on by a snap ring and is easily removed. Remember to separate all the parts and return them exactly as they were removed. (See photograph 6.)

Next I put the lock in a vice and drilled off the press fittings that held the lock to the bracket. (See photograph 7.) To drill these points I used a 5/16" Black & Decker Bullet Point drill bit. (See photograph 8.) Because of the shape of its point the

*Continued on page 138*



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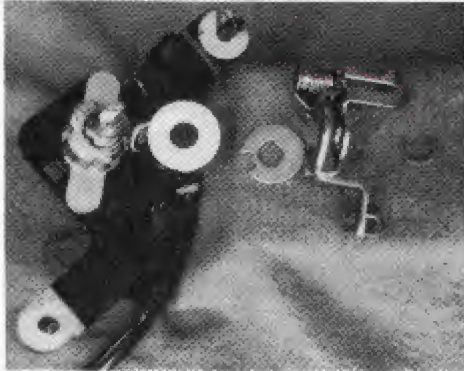
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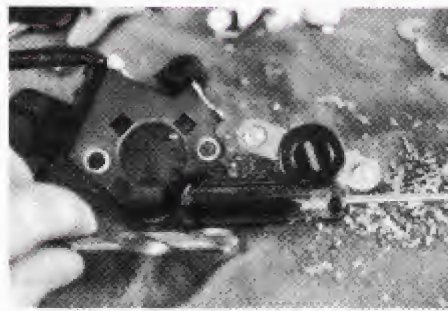
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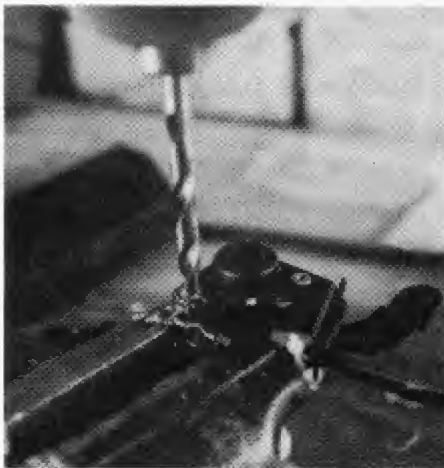
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6. Removing the pawl and electrical switch.



8. Using Black & Decker's Bullet Point drill bits made the job much easier.



7. Drilling the press fittings out to separate the lock and bracket.



9. Notice how the Bullet Point bit removed only the flared part of the press fitting and left a center hole that would later be used for drilling rivet holes.

bit cut away only enough of the press fitting to separate the lock from the bracket without removing too much metal from the lock, plus it left center holes which I later used to drill the rivet holes. (See photograph 9.)

With the lock separated from the bracket it was easy to remove the facecap and disassemble the lock (See photographs 10.) Be careful not to loose the small ball bearing and spring inside the back side of the lock.

When reassembling I found it easier to insert the plug almost all the way back into the cylinder. Then I put the ball bearing in place over its spring. I carefully pushed the ball bearing down with a small screwdriver and pushed the plug in till it seated. (See photograph 11.)

Replacing the facecap and dust cover was a little trickier. First, I put the spring and dust cover door into the plug and held it in place with my finger. Then, I inserted the key through the facecap and dust covers (there are two covers, one metal and one red plastic) and into the lock. With the key inserted into the lock, the dust cover door stayed in place making it feasible to position the dust

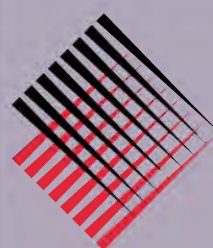
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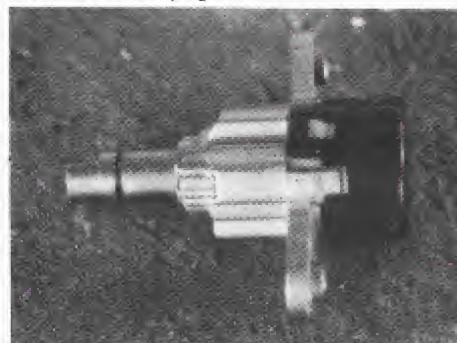


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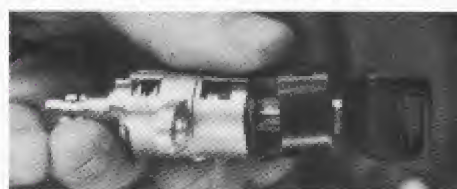


10. The lock removed.



11. Replacing this small ball bearing is a tricky task.

covers and snap the facecap down tightly into place. (See photograph 12.)



12. Even trickier is replacing the facecap and dust cover components.

To reattach the lock to the bracket, I drilled 3/16" holes through the press fittings to provide for rivets. The drill marks were already set and centered from the previous drilling. (See photograph 9.) Putting the lock onto the bracket I fastened it with two 3/16" x 1/8" aluminum rivets. (See



13. Using two 3/16" x 1/8" aluminum rivets to finish the job.

photograph 13.) After reattaching the electrical switch and pawl I put the lock back into the vehicle. §



## Company Profile...

# Don-Jo Manufacturing

*"With over 450 items, they have products that add security, repair damage, and decorate the door and frame.."*

**D**on-Jo Mfg. has been serving the locksmith industry for over ten years now. In that time they have expanded their product line from three items to over 450 items! The line is divided into six different categories: strikes, latch protectors, scar plates, flat goods, filler plates and wrap-arounds. They have products that add security, repair damage, and decorate the door and frame. The entire product line is manufactured in their sterling, MA facility, making them a true American manufacturing company.

The basic 4-7/8" Asa strike was the very first product. Soon after the idea of the security strike with 3" screws was introduced and immediately accepted. Since that time the strike category has expanded to include 8", 12" and 18" security strikes. The introduction of extended lip strikes expanded the category once again. They now offer four different styles of extended lip strikes in four different lengths. (See illustration 1.)

Latch protectors are today, and always have been, an integral part of the line. (See illustration 2.) With over 15 different styles to choose from, they have the one needed to complete most jobs. Their ILP or interlock latch protector for in-swinging door has been a huge success. They can be found on hotels, military bases, condominium complexes, and apartment houses throughout the world.

The scar plate category was introduced just three years ago. Within this product offering are six different styles of scar or remodeler plates. They range from simple 3-1/2" diameter "goof" rings to 15" remodeler plates.

Everything in this category was designed to cover up damage to the door that does not require a reinforcer plate. All the scar plates are available in four architectural finishes to match up with the existing hardware on the door.

Don-Jo first incorporated flat goods

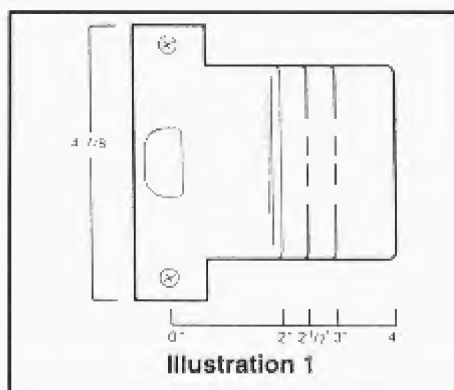


Illustration 1

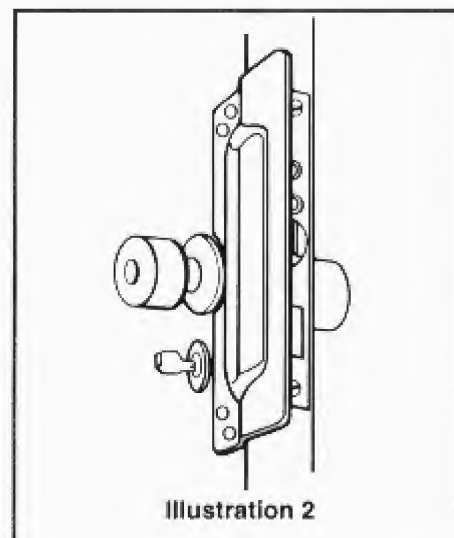


Illustration 2

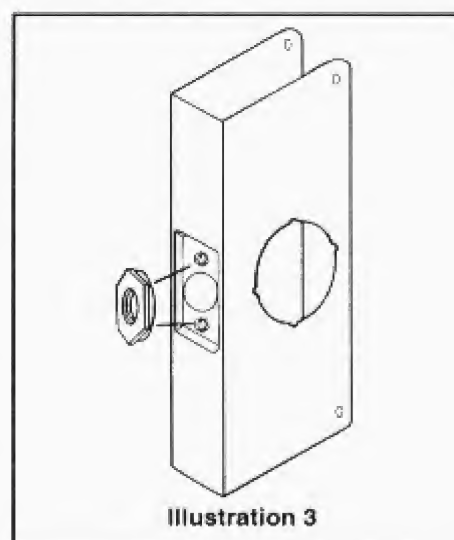


Illustration 3

into their line three years ago. At that time they introduced their innovative display packaging on push, pull, and kick plates. This sturdy, attractive packaging allowed the locksmith to hang the product in their display area, acting as a "silent salesman" and encouraging impulse sales. Recently, they introduced a full line of "contract packed" flat goods to allow the locksmith to be more price competitive on the larger jobs.

The filler plate category has been in existence for over eight years. With over 26 different sizes to choose from, the category is near complete, you can find everything from hinge shims to edge fillers to hole fillers. The filler plate kits, another Don-Jo innovation, are designed to come with everything needed to fill a "86" or "161" cutout. The company has also just announced an expansion into a line of filler plates for aluminum doors.

The wrap-around category is another fairly new line, just over five years old. Distinguishing themselves from others on the market, the classic wrap-arounds feature stainless steel threaded inserts for maximum latch holding power. These inserts allow for a secure mounting of the latch to the plate and eliminates the screws from loosening. They offer wrap-arounds ranging from 4-1/2" to 20", with variations to work with 3-3/4" backsets, 5" backsets, Simplex locks, mortise locks, double locks, heavy-duty key-in-levers, best 9K series, and the new Alarm Lock DL2500. (See illustration 3.)

Always listening to the suggestions made by locksmiths, Don-Jo is constantly adding product to make your job easier. By manufacturing everything themselves, they assure you the quality of American-made products.

For more information contact: Don-Jo Manufacturing, P.O. Box 929, Sterling, MA 01564-0929, (508) 422-3467. §



## Opening Tips...

# Open The '93 Mazda RX7

*"This vehicle has been redesigned from the ground up and it uses a unique lock system."*

**1** 1993 has brought us an all-new Mazda RX7. (See photograph 1.) This vehicle has been redesigned from the ground up and it uses a unique lock system. Close inspection of the vehicle will reveal that the door handle and lock are mounted on top of the door in a triangular area. (See photograph 2.) You can open the RX7 with the stepped end of a tool such as the Pro-Lok A0-29. (See photograph 3.) To open the RX7:

(1) Visually identify the interior door



1. The 1993 Mazda RX7.



2. Area where the handle and lock are found



3. Proper Insertion of the tool

lock button on the passenger door.

(2) Insert a wedge into the passenger door "about 15" from the rear edge of the door.

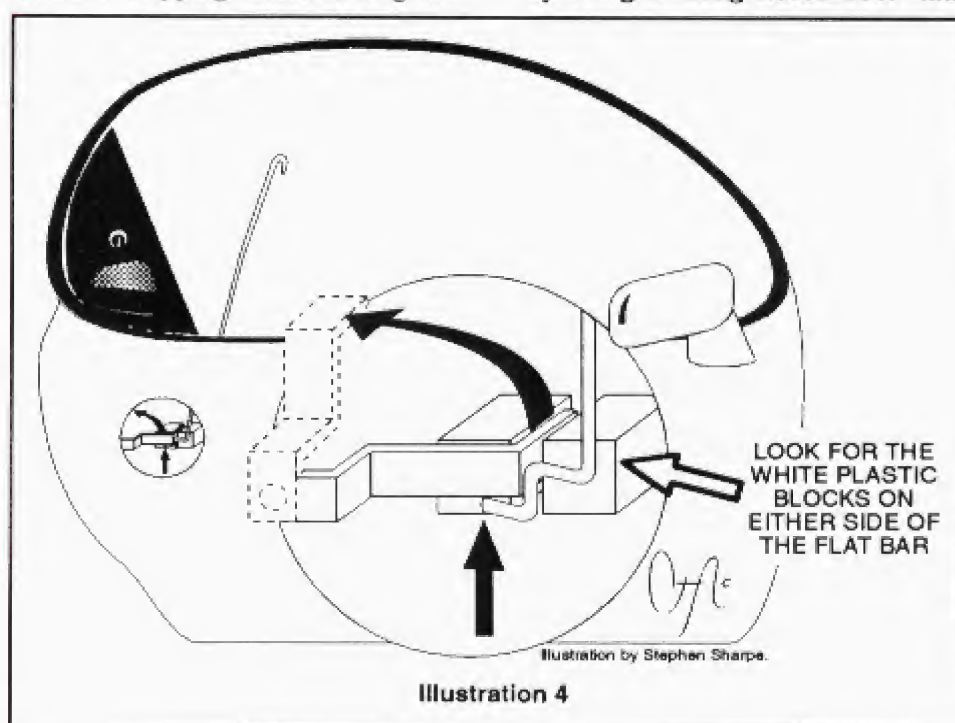
(3) Insert a Krypton light into the door and visually identify the white plastic block located about 12" directly below the exterior door handle at the rear edge of the door. (4) Insert the A0-29 into the door with the "stepped" tip of the tool rearward, between the weather-stripping and window glass.

unlock the door.

Use of a good opening light will greatly simplify this process. (See illustration 4.

### Opening Tip:

Many cars feature a "frameless" door window. These cars are usually available with T-Tops or as a convertible, such as the Corvette, Camaro and Fiero. These windows create an excellent opening opportunity by using a "Long Reach Tool" that



The tool should be about 3" from the rear edge of the glass, forward of the handle assembly.

(5) Lower the tool until the tip of the tool is about 12" down in the door.

(6) Rotate the tool about 90 degrees clockwise. The tip will lift up under the corner edge of the offset cam. This cam is tightly positioned in the slot of the white plastic block.

(7) When the tip of the tool is under the cam edge, you may see the button move. Lift the cam up and rearward to

enters the interior of the vehicle. To make a "Long Reach Tool" use the shaft of an old CB whip antenna. To open these cars push the tip of the tool into the interior of the car at the top rear edge of the window. Push the tool in, and position the tip of the tool on the interior door lock button. Push or pull the button to unlock the door.

For more information contact: Pro-Lok, 1060 N. Batavia, Suite C, Orange, CA 92667, (714) 633-0681. §



# Shop Talk

## Helpful Questions and Answers

Written by *all* of the following authors: Dale Libby, Robert Sieveking, Dave McOmie, Shirl Schamp, Don O'Shall, and Jack Roberts.

**Shop Talk** answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your locksmith questions to Shop Talk: *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

*Q: I read with interest your article on Corbin mortise locks. This article mentions a Corbin/Russwin Mortise Locks parts manual. How do I get the manual? Plus, our building is equipped with Russwin mortise locks that were installed in the late 1950's. While they are not exactly the ones pictured in the article, they are very similar. How do I get parts for these units? James E. Dike, Orange, MA.*

A: The Corbin/Russwin manual can be obtained through most Corbin/Russwin distributors. The parts for your locks, however, may be a real challenge. While I do not have a photo of the units, if they were installed in the 50's they more than likely have the cast iron casing. Parts for these assemblies are no longer produced or available. It may be necessary to start upgrading to newer assemblies. Or, as you mentioned in your letter, have replacement parts machined.

\*\*\*\*\*

*Q: I have a number of older Sargent, Yale, and especially Lockwood and Corbin mortise locks which require periodic servicing. Where can I get service manuals? Steve Claudeh*

A: Believe me, I know how frustrating this situation can be. As a locksmith, my largest client was a hospital that used locksets from five different manufacturers. On top of this, they used three different series of hardware from these manufacturers as well as three different keyways. It was literally a nightmare every time I went to service them.

Whether you can get manuals or not will depend a great deal on how old your "older" means. While Corbin has had virtually the same internal components for their steel case mortise assembly for the last 15 years, Yale has made changes and now even include an electrified version.

So, to start, it is necessary to ascertain the age and model, if possible, of the different locksets. Most steel case mortise locks will be 15 years old or less, and excepting a few that have been discontinued, parts and manuals are still available through distributors. If the locksets have a cast iron case chances are you're out of luck. All major manufacturers have long since discontinued this style lock.

If the locks you are working are the older cast iron versions, Marks Hardware does still manufacture a few lines with the cast iron case lock that may be retrofitted to the application. Otherwise it may be wise to move them into the new steel case locks.

\*\*\*\*\*

*Q: Can you please identify and give me information on the following padlock? Chris Bushell, Canada.*

A: Your drawing helped Chris. I was able to find your padlock in *The National Guide to: Antique Padlocks*. What you have was initially designed by Eagle, dating back to the early



Illustration 1

1900's, and was called the Mastodon. A similar lock made by Eagle is called the Mammoth. This same design has been used by various manufacturers, however, and may carry various names.

This is a lever lock, incorporating eight levers that act as the latch. The lock may be made of steel or brass. To fit a key, impression the lock using a DiMark ST/46 or ST/50 keyblank.

\*\*\*\*\*

*Q: A customer came in driving a 1989 Beretta where he could not remove the key from the ignition. I would appreciate any help you can give me. Louis Taylor, Napoleonville, LA.*

A: There are a few possibilities for the problem, Louis. A remote possibility is a popped or exploded tumbler retaining cap on the ignition cylinder. This can be easily checked by removing the cylinder and seeing if it operates.

Continued on page 156



Continued from page 146

Another possibility is the sector gear and rack being out of sync. This can only happen, however, if the ignition cylinder had been previously removed and improperly installed.

Or, the actual electrical ignition switch, found on top of the column, inside the dash area, needs to be adjust.

Finally, if the vehicle has a manual shift or a consul shift, the cable controlling the key interlock switch may need adjustment. To see if this is the problem, drop the knee bolster, and if necessary, the column, to gain access to the ignition switch.

The shifter cable will be attached to the side of the switch inside a tube-like plastic housing. A white plastic collar and a terminal stop are attached to the end of the cable and are visible

from the front of the tube. Using a small screw driver, gently press the terminal stop and white plastic collar down into the tube. Check to see if the ignition cylinder turns. If it does, refer the customer to a dealer for a cable adjustment.

\*\*\*\*\*

*Q: On occasion I get a customer who wants all of their locks keyed to one key, even though they may have several different brands of locks. Having seen cylinder inserts available for different locks, how do I know if the locks my customer has will accept the replacement cylinders? Howard Berlin, Wilmington, DE*

*A: Both Lori and Ilco have cylinder inserts that allow you change the*

keyway of a door knob or deadbolt.

The cylinders from both companies are designed to fit the Schlage "A" series type lock using a horizontal tailpiece, or the Arrow style lock using the vertical tailpiece. Many door knobs have taken on this type of construction, including the Sargent 6 Line, LSDA , Marks, and US Lock lines.

I have experience three problems when retrofitting these cylinders into various other brand knobs. First, in some instances the plug and the plug face of the original equipment may have a smaller diameter than the new cylinder, the LSDA residential grade (grade 3) knobset is an example. These cylinder inserts do, however, fit the LSDA commercial and heavy duty (grade 1 and grade 2) locksets beautifully.

Second, the knob must accept a six pin cylinder. All of the cylinder inserts available are drilled for six pins but are only keyed to five pins.

Three, the tail piece must fit the knob. The tailpieces for either brand will fit most knobsets. Lori supplies three different length tailpieces, while Ilco offers a long break away tailpiece, much like a rim cylinder has. I have run into problems, however, with the tailpiece of the Ilco cylinders.

In Schlage style knobsets, the tailpiece is used to prevent the knob retaining button from being depressed until the plug is turned. The rather narrow nature of the Ilco tailpiece allows the button to be depressed and the know removed without turning the plug. In essence, opening of the door can be gained by removing the front of the door knob and using a screwdriver to unlock the door.

I have also experience a high degree of failure on the tailpiece of the Ilco cylinder. Under heavy or prolonged use, the end of the tailpiece that fits into the back of the cylinder has had a tendency to break.

For single keying I have found both cylinders to work equally as well. Under masterkeying conditions, however, I have found the tolerances of the Ilco cylinder not acceptable, while the Lori cylinder acceptable with a minimum .030" step. §



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# Business Briefs

News From The Locksmithing Industry

**Terry Hershberger**, Chairman of Sargent & Greenleaf, died March 2,



**Terry Hershberger**

1993, after a lengthy illness. Terry Hershberger's unique style won him the respect of those with whom he did business, as well as the admiration and affection of S & G's employees...

**Tracy H. Lang** has been named product manager, new products, for the padlock division of **Master Lock Company**. As product manager, Lang will be responsible for developing and introducing new products for the padlock, combination padlock and related lock lines...

**Leslie-Locke, Inc.** recently appointed **Cory McCarthy** to the



**Cory McCarthy**

newly created position of Sales Manager, Midwest Region. In his new position, McCarthy will have account

responsibility for major hardware co-ops and retail chains in the Midwest...

**Kwikset Corporation**, recently received the "Home Mechanix Best Value" award from *Home Mechanix*



**Bob Shortt of Kwikset with John Young of Home Mechanix**

magazine for its new TITAN line hardware. *Home Mechanix*, a monthly magazine searched the home improvement industry for products that boost a home's market value, make home improvements easier and less costly, and enhance home enjoyment, comfort and convenience...

**Arius** announced the promotion of **Scott Fowler** to Vice President of



**Scott Fowler**

Branch Sales. He will assume responsibility for all U.S. branches and branch operations staff...

**Medeco High Security Locks, Inc.** has restructured its Door Security operations to include Medeco Electronics. The company originally started the electronics business as a division of Medeco to specialize in

access control products...

**DoorKing** is pleased to announce that all of the company's Gate Operators and 1800 Series Telephone Entry Systems will carry a two year limited warranty...

**Briggs and Stratton Technologies** announces the addition of **Michael Elliot** as Vice President, Sales and Marketing...



**Michael Elliot**

**Corbin Russwin Architectural Hardware**, has announced the appointment of **Ashley Talton** to the



**Ashley Talton**

position of sales representative for Oklahoma and Northern Texas. Talton has over ten years of experience in building material, with four years in the hardware business. He was formerly employed as a Contract Manager for a hardware distributor in Oklahoma...



# Bits & Pieces

Informative Tidbits For The Security Industry



by Tom Seroogy

**W**ell, if you can't believe Paul who can you believe? According to a recent Paul Harvey radio broadcast, the American Automobile Association is petitioning auto makers to change the way they design the locking systems on their cars. Apparently the American public spent \$400 million dollars on car openings last year.

Nothing was mention as to who received most of that money, nor on the amount of damage caused by untrained personnel using opening tools. Hey, Paul, how about the rest of the story!

\*\*\*\*\*

Some new car stuff is available:

From Auto Security Products, three new catalogues are available. The new Application Guide (Catalog 12A) listing the available ignition and door locks as well as service kits and parts by the year, make and model of the vehicle.

The Dealer Price List and Estimated Time Guide (Catalog 12P) tells the locksmith the estimated part price and labor time that dealers a lot for various lock repairs.

And, the OEM Application Guide for Locksmiths gives the locksmith a cross-reference from the dealer part number to the Auto Security Part number. This guide allows locksmiths the ability to service auto body shops and non dealer

garages that often turn to dealers for their lock parts.

These three catalogs are available from local ASP distributors.

\*\*\*\*\*

Briggs & Stratton is offering a simple auto theft deterrent called the Magic Touch. The device is simple to install and prevents the car from starting by cutting off power to the starter. To start the car, the user simply touches a hidden, touch sensitive switch somewhere in the vehicle and turning the key.

A relay is installed between the ignition switch and the starter. Touching the switch triggers the relay closed, allowing the car to start. This should be easy money make for locksmiths who enjoy auto service.

Jet is introducing six new keyblanks. The B2 (B&S), M5 (Master 81KM), HR2 (Harloc), SUZ11 and SUZ17 (Suzuki), and Y155 PH ('93 Chrysler Plastic Head).

Also, they are offering their Yale Y6, Y52, and Y54 blanks to two different styles. The round bow, carrying the standard numbers, and the "E" bow (square), carrying the standard numbers followed by an "E" (Y6E, Y52E, Y54E).

\*\*\*\*\*

Silca is expanding its line of Personalized Neuter bow keyblanks. Added is the rounded-head Neuter Box key previously made by Silca and distributed by HPC. The keys come in all major keyways.

Included is a free coining die in the "A" or "B" style with the purchase of 10,000 or more pieces. For details, contact the nearest Silca distributor.

\*\*\*\*\*

Detex has released its new full-line security catalog. The catalog features all major Detex lines, including exit alarms, exit control locks, access control systems, and accessories.

To get this free catalog, contact Detex at 800-729-3839.

\*\*\*\*\*

Speaking of exit alarms. At the time of this writing, Illinois locksmiths are fighting two state bills that will eliminate them from installing any type of alarmed exit device. In essence, Illinois State House Bill 412 and Senate Bill 252 will give exclusive rights to installing alarmed exit devices to licensed alarm companies. The vague definition of "Burglar Alarm System" allows the inclusion of such exit devices as the Detex and Alarm Lock panic alarm devices as well as the simpler Pilfer Guard.

Because these bills, introduced by the alarm industry, came to light so late in the process they cleared both House and Senate approval with little opposition.

Leading the fight to amend the bills to exclude locksmiths from the licensing requirements is John Greenan, president, and Kathy Zaniolo, vice president of the Greater Chicago Locksmith Association. There efforts are strengthened by the help of ALOA board member Rick Ohmit. §



# The Lighter Side

Writer's Cramp



by Sara Probasco

"Why are you writing your name all over those pages?" Don asked.

"I'm practicing."

"Practicing what?"

"My autograph."

"What in heaven's name for?"

"Well, athletes train for the Olympics, prospective mothers train for childbirth, even neighborhood joggers do warm-up exercises. I figured I should get in shape for signing my name, before we leave for Chicago," I replied. "Where are you going?"

"I'm hiding the checkbook," Don called over his shoulder. "The way you're working out, my guess is you're in training for a shopping marathon."

I couldn't help laughing. "Great idea. However, this time, I'm just getting in shape for an autograph party at ALOA."

"Autograph party?" he asked, coming back down to the table. "What's that?"

"A misnomer, actually. The movies usually depict it as a gala occasion where an author's publisher breaks out the champagne at the neighborhood bookseller's store and thousands of friends and relatives toast the author and buy her book, which she autographs for them."

"I see. So, what's the misnomer?"

"From what I hear, it rarely happens that way. More often, even best-selling authors twiddle their thumbs in cramped book

departments, somewhere, hoping somebody—anybody—will stop in and buy their book and ask for their autograph."

"If that's the case, why would you want to do it?" Don asked.

"Why, to satisfy all of my wonderful, faithful readers who are dying to own a signed, first edition copy of my book," I said. "I plan to be at the National Locksmith booth during ALOA's trade show so I can autograph books for anyone who wants to buy one." I gazed off into the distance. "Just think, when I become a famous novelist, this book will be a real collector's item."

"Dream on."

"Stranger things have happened. At any rate, I'm going to continue practicing my signature. I'm sure some people will want the book just to read about your crazy antics, whenever they want a chuckle."

"Tell me you didn't include all those stories about me."

"Sure we did. Why else would we have named it *Service With a Smile*? You're what makes everybody laugh."

"Thanks a lot."

"I really didn't mean that the way it sounded. I love your humorous approach to life. In fact, there's only one thing I'd like to change about you."

"What's that?"

"Your name. When I think about signing all those thousands of books, I wonder if I should have used a pseudonym—something shorter. I'll bet Fay Ray never got writer's cramp, signing her name."

"Neither did Reginald Phenias Stutgardner."

"Who is Reginald Phenias Stutgardner?"

"He's a guy I knew in school who wrote a book about the nocturnal habits of the Tse Tse fly. I never heard him complain about writer's cramp from signing autographs."

"With a topic like that, I think he's safe."

\*\*\*\*\*

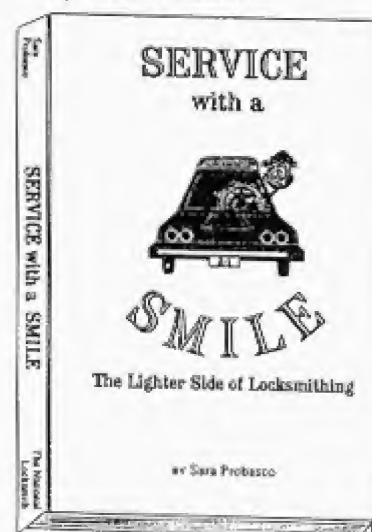
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by Sara Probasco.



Not just for locksmiths, the humorous escapades of Don and Sara Probasco should tickle the funny bone of anyone in a service-oriented business.

PLAN AHEAD! Christmas will be here before you know it. At ALOA, Sara will personally autograph a gift copy of this book for each locksmith on your list at the convention-discount price.

\*\*\*\*\*



# Beginner's Corner

## Key For A File Cabinet



by Eugene Gentry

A customer brought in a two drawer file cabinet and wanted a key made. Examination showed no identifying labels on the file cabinet or on the lock to help determine what type of key blank to use (see



1. Unidentified file with cam locks.

photograph 1).

The lock on the drawers was a wafer cam lock about 3/4" long with the cam staked on the back of the lock, thus preventing the lock from being taken apart. The lock contained five wafers and was held in place by a U shaped clip.

I started out by trying key blanks commonly used on wafer cam locks. I tried B1, Na12, Y11, Y12, Chicago, Corbin and none would enter the keyway. After trying several others I picked up a B5 that was precut, and it fit perfectly. That was the only B5 that I had on hand so I compared it to the B1 and it appeared to have the same keyway, yet it would not enter the lock. Careful filing of the top edge of the B1 blank allowed it to fit the keyway.

The next step was to see if the key could be impressioned. I should have filed the blank to a knife edge, but didn't, and the marks were not showing up well on the flat edge. Impressioning was not successful, so I decided to read the wafers.

Reading the wafers is an excellent way to make a key for a wafer lock. I would recommend the book, *Wafer Lock Reading* by Robert Sieveking (available from *The National Locksmith*). It will tell you how to read all types of wafer locks.

I made an "L" shaped reading tool out of stiff wire to hold the wafers down. Using a Magna Scope to see, the wafers were compressed with the

stiff wire. As the wire was slowly withdrawn, individual wafers would pop up and you could see which one was a deep, medium, or shallow cut in the blank. On this file cabinet lock, wafers 2, 4, and 5 were deep cuts, probably a 5 depth cut, and wafers 1 and 3 were shallow, about a 2 cut. The cuts would read from the bow, 2-5-2-5-5.

You can use either the impression marks or a spacing key to find the spaces on your blank. I filed the shallow cuts first, then the deep cuts, trying the blank. After the third try, the key worked perfectly in the lock (see photograph 2).



2. Keys made with B1 blanks.

To summarize:

- 1) Look for identifying labels or numbers on the file cabinets or locks.
- 2) When impressioning wafer locks, file the blank to a knife edge. It will show the marks better.
- 3) Read the wafers.
- 4) File the cuts or use a code machine . §



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# Industry Meetings

## July 7-8, 1993

Medeco Security Locks  
Medeco Certification Class  
Salem, VA  
*Contact: Edie Dunn (703) 380-5000.*

## July 15-18, 1993

Clark Security Products Trade Show  
Washington, DC  
*Contact: Pam Engdahl (619) 974-5273.*

## July 29-31, 1993

Associated Locksmiths of America  
Convention and Trade Show  
Rosemont, IL (Chicago)  
*Contact: Victoria Dempsey, ALOA, (214) 827-1701.*

## August 13-15, 1993

North Carolina Locksmith's Assn.  
Quarterly Meeting  
Charlotte, NC  
*Contact: Kathy Stewart, 809 Wicker St., Burlington, NC 27217, (919) 227-7559.*

## August 18-19, 1993

Medeco Security Locks  
Medeco Certification Class  
Salem, VA  
*Contact: Edie Dunn (703) 380-5000.*

## August 23-26, 1993

American Society for Industrial Security (ASIS) 39th Annual Seminar and Exhibit  
Washington, DC  
*Contact: ASIS, 1655 N. Ft. Myer Dr., Suite 1200, Arlington, VA 22209, (703) 522-5800.*

## August 26-29, 1993

Clark Security Products Trade Show  
San Diego, CA  
*Contact: Pam Engdahl (619) 974-5273.*

## August 31-September 2, 1993

The International Security Conference & Exposition (ISC East)  
New York City  
*Contact: Joani Phoebus, Show Mgr, ISC Expo, 1350 E. Touhy Ave., Des Plaines, IL 60017-5060, (708) 299-9311.*

## September 8-11, 1993

SERLAC, Tarpon Springs, FL  
*Contact: Larry Patton (800) 845-5294.*

## September 9-12, 1993

Clark Security Products Trade Show  
Denver, CO  
*Contact: Pam Engdahl (619) 974-5273.*

## September 10-12, 1993

T.A.O.L. Twentieth Annual Convention  
Scarborough, Ont.  
*Contact: T.A.O.L., 2220 Midland Ave., Unit 106, Scarborough, Ont. M1P 3E6, (416) 321-2219.*

## September 15-16, 1993

Medeco Security Locks  
Medeco Certification Class  
Salem, VA  
*Contact: Edie Dunn (703) 380-5000.*

## September 15-19, 1993

Professional Locksmiths Assoc. of Alberta  
Convention & Trade Show  
Red Deer Lodge, Alberta, Canada  
*Contact: The Professional Locksmith Assn. of Alberta, Box 68060 BDPO, Edmonton, AB T6C 4N6, (403) 465-5083.*

## September 17-19, 1993

Missouri Iowa Nebraska Kansas (MINK) 6th Annual Convention  
Des Moines, IA  
*Contact: Ken Novey, 125 School St., Marion, IA 52302, (319) 377-4295.*

## October 8-10, 1993

Penn-Ohio Locksmiths' Association, Inc.  
Trade Show  
Holiday Inn, Pittsburg Airport  
*Contact: M.R. Egler (216) 676-8464.*

## October 10, 1993

Accredited Lock Supply Co.  
19th Anniversary Trade Show  
Secaucus, NJ  
*Contact: Norman Koller, (800) 652-2835.*

## October 16-19, 1993

Door and Hardware Institute 18th Annual Convention and Trade Show, 57th Annual Industry Exposition  
Vancouver, British Columbia, Canada  
*Contact: Joan Redfern (703) 222-2010.*

## October 19-24, 1993

1993 Northwest Tri-Regional Locksmith Conference  
Delta Pacific Resort & Conference Centre  
Richmond, Vancouver, BC, Canada  
*Contact: Peter Boddy (604) 272-2906*

## October 20-21, 1993

Medeco Security Locks  
Medeco Certification Class  
Salem, VA  
*Contact: Edie Dunn (703) 380-5000.*

## November 3-7, 1993

California Locksmiths Association Annual Classes, Convention and Trade Show  
Riverside, California  
*Contact: CLA state office (800) SOS-LOCK.*

## November 12-14, 1993

North Carolina Locksmith's Assn.  
Quarterly Meeting  
Burlington, NC  
*Contact: Kathy Stewart, 809 Wicker St., Burlington, NC 27217, (919) 227-7559.*

## November 17-18, 1993

Medeco Security Locks  
Medeco Certification Class  
Salem, VA  
*Contact: Edie Dunn (703) 380-5000.*

## December 1-2, 1993

Medeco Security Locks  
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## Technitips

*Continued from page 15*

to secure a spare keys to your car. This method might also prove to be more profitable.

When asked by a customer interested in a hide-a-key box, simply recommend drilling a hole in the head of their spare key, the same diameter as their license plate screw. Place the screw through the key, with the key behind the license plate. The key is securely fastened to the car, and in a very inconspicuous place. The key can be removed, in most cases, with a coin or screw driver.

This installation can be done very quickly, in front of the shop, at the time of the duplicate key purchase. The cost will be just a few dollars more than the price of a key box.

Simply inform the customer of the risk of losing the hide-a-key box to a big bump or an experienced thief, who knows where to look, and the sale will be complete.

Securing the key to the exterior of a vehicle is not something I recommend to any customer, as a professional, but if they are insistent upon having it done, this is a safer technique.

Carmine A. Guarino  
New Jersey

\*\*\*\*\*

This little trick may help someone save a key sale, if asked to duplicate a key for the new Pro Series Master Padlocks.

I was going to use the new cylinders for a job, wanting a keyway that everyone couldn't get a key for, but I found too few blanks on my own board. I went over the various other small cylinder keys on the board and tried various keyways, until I found one that fit. Sure enough, about the fifth blank I tried passed the keyway. I found that the National Key blank D4292 or 1069LB fit and copied perfectly. Though truly not the professionals choice, you may find a need to make this substitution one day. Good luck.

Dale Jenkins  
Missouri

\*\*\*\*\*



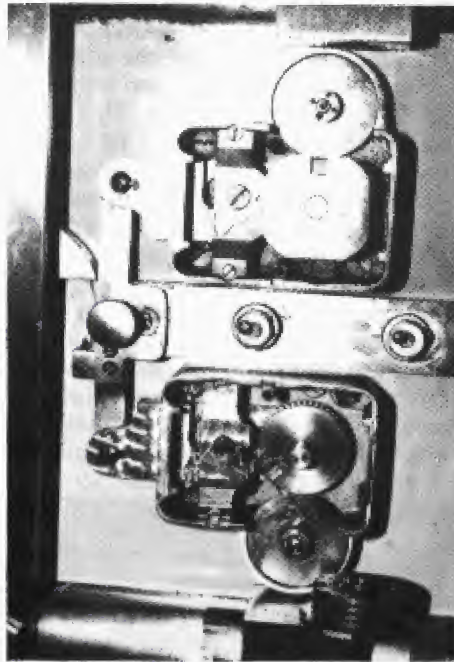
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## Safecracking Frenzy!

Continued from page 106



**24.** The two Yale four wheel locks had off-set drives, were mirror images and had L.O.B.C. back covers.

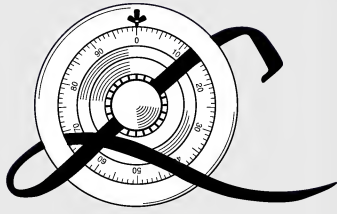
numbers. The vault was operated on a dual custody system, which meant both locks must be unlocked to open the vault door. Each lock, therefore, had to be drilled and scoped.

The drilling time for each hole was a little over two hours. The drilled holes can be seen the photo. The hole in the top lock is a little to the left and below the wheel pack. The lower lock was drilled a little to left and above the wheel pack. Each hole provided a great view of wheel pack with the Fibertron Scope. There were 'high fives' by Lee Swearingin and Jim Kellogg as they swung open the vault door. (See photograph 25.)

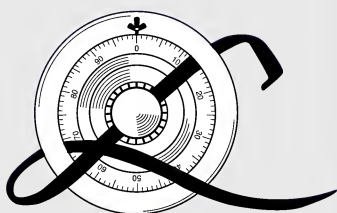


**25.** Cheering as the door opened.

For item information: (Safe door templates), E. Willis & Sons, Ed Willis, P.O. Box 636, Temple City, CA 91780. (Drill rig and carbide bits): Strongarm Security, Robert Volosing, 2228 Kenry Way, So. San Francisco, CA 94080. (Magnetic drill rig): Locks Unlimited Inc., John Cannon, 7014 Bedrock Rd, Alexandria, VA 22306. §



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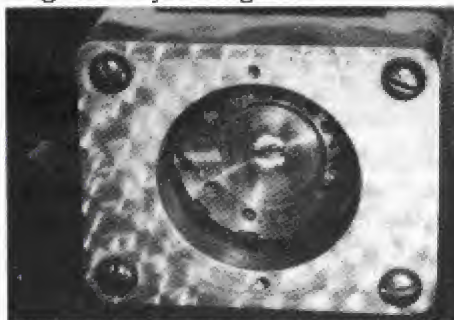
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## Shelling Safes

*Continued from page 123*

tailpiece. (If it had been right on the tailpiece, it would have been extremely difficult to see the wheels).

In photograph 17 we see a drill bit sticking through the hole. This gives us a pretty good idea of the angle used. I have to admit to not being sure what people mean when they say, for example, "angle in at 30 degrees." When you drill straight in, is that considered 90 degrees or 0 degrees? In other words, does "angle in at 30 degrees" mean that you start counting from the flat face of the door outward? (in which case drilling straight in would be 90 degrees). If so, then this angle looks to me to be about 55 degrees. Any other guesses?



17. Angled drill bit sticking in the hole.

Photograph 18 gives us a good look at the curb-mounted wheel pack. There are three 2-3/8" diameter screw-change wheels.



18. The curb-mounted wheel pack.

While I was servicing the lock and setting a combination, Tom partially tapped the drilled hole, threaded in a hardened screw, and then torqued it in past the threads to ensure its staying put. We ground the head off, and the evidence of penetration was nearly invisible without a microscope. A job well done. And a bill well paid.

Later that evening, while we were roasting marshmallows over an open fire, one of the kids wondered if Garth Brooks might be changing jobs soon, that it sure would be fun to open a safe for him. Gazing out over the endless ocean, I smiled in agreement. It sure would, even if Nashville doesn't have a seashore.

See ya next month. §

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## DeForrest Interview

*Continued from page 113*

role of the consultant more than ever before, and the ones who are going to succeed are those who are 'total solution providers.'"

According to Sean, in order to succeed the locksmith must develop product, technical and service expertise.

He must stay current with available products and technology. Forming better ties to manufacturers and wholesale distributors is going to be fundamental to being affective. How this is accomplished, states Sean, is going to be, in part, up to the manufacturers and wholesale distributors. In fact, companies like American Lock and Supply and H. Hoffman already hold seminars for the locksmith, allowing factory reps to introduce and explain the applications of their new product lines. The locksmith must also be able to network total solutions, adopting a larger view of security.

"While not all locksmiths may not be able to replace a door, or put in an alarm or access control system, he must be able to adopt the role of a consultant," says Sean, "Finding and working alongside companies that specialize in the different areas of security. "He needs to know when to recommend the use of a guard dog or the hiring of security guards. He may not be able to do it himself, but the locksmith needs to know when and where to employ differing forms of security.

"This is hard because this takes the locksmith out of his comfort zone," said Sean. "It's not something that is easy for anyone to do."

According to Sean, the locksmith also needs to learn how to market himself; Transforming and improving his company through proper market planning and business development. He needs to develop an image where locksmith is synonymous with security in the eye of the residential and commercial customer.

To further develop this image and to draw closer ties between the locksmith and the manufacturer and distributor, Sean is serving as a wholesale distributor representative with the Security Professionals Council, an independent advisory board of manufacturers, wholesale distributors and locksmiths. §



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